

# RANCH VIEW MIDDLE SCHOOL

## Traffic Impact Study

Project Number: 1124175

Prepared For: Douglas County  
School District

March 2, 2025

**DIBBLE**



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### Highlands Ranch, Colorado

Project Number: 1124175

Prepared For: Douglas County School District  
Planning and Construction  
2808 Highway 85, Building B  
Castle Rock, Colorado 80109

March 2, 2025

Nicholas J Westphal, PE  
Project Manager

**Dibble & Associates Consulting Engineers, Inc., dba Dibble**



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## EXECUTIVE SUMMARY

Douglas County School District (DCSD) is considering relocating 6<sup>th</sup> Grade students from elementary schools in Highlands Ranch to Ranch View Middle School (Ranch View). The 6<sup>th</sup> Grade students are proposed to be relocated from Trailblazer Elementary, Coyote Creek Elementary, Eldorado Elementary, Saddle Ranch Elementary, and Stone Mountain Elementary. This traffic impact study addresses existing traffic conditions and potential traffic challenges at Ranch View, while considering the anticipated increase in traffic caused by the school consolidation.

Students are picked up and dropped off in two areas with the primary pick-up and drop-off area being the Ranch View parking lot accessed from the right-in/right-out Wildcat Reserve Parkway access. The second pick-up and drop-off area is within the parking lot between Ranch View and ThunderRidge. This parking lot is accessed from Wildcat Reserve Parkway via the Mountain Maple Drive intersection. School bus service is provided for individuals within Ranch View's attendance boundary, but is restricted to individuals living more than 2 miles from the school.

The projected 2028-2029 combined enrollment at Ranch View with 6<sup>th</sup> grade is 1,080 students, which is greater than the maximum historic enrollment, but less than the ideal building capacity. Taking into account the estimated street parking trips, the estimated ingress/egress trips, estimated pedestrians and bicyclists converted to vehicle trips, and anticipated carpooling, the resulting increase in trip demand for Ranch View is about 344 trips during the morning peak hour and 336 trips during the afternoon peak hour.

Traffic will be increased with the additional enrollment. Although historic enrollment levels suggest Ranch View could accommodate the increased traffic, more vehicles are expected to travel to the school than currently do. To address existing and potential future traffic challenges the following mitigation measures are recommended:

- Analyze the ability to expand bus service to the middle school by reducing the walking radius around the school. Increased bus service was not analyzed as a required mitigation, but could provide efficiency to the pick-up and drop-off by having additional buses and less personal vehicles.
- Widen the parking lot access to provide 2 entrance lanes into the main parking area between the high school and the middle school allowing for one lane to queue and one lane to pass.

# 1. INTRODUCTION

## 1.1 Study Purpose and Scope

Douglas County School District (DCSD) is considering relocating 6<sup>th</sup> Grade students from elementary schools in Highlands Ranch to Ranch View Middle School (Ranch View). The 6<sup>th</sup> Grade students are proposed to be relocated from Trailblazer Elementary (Trailblazer), Coyote Creek Elementary (Coyote Creek), Eldorado Elementary (Eldorado), Saddle Ranch Elementary (Saddle Ranch), and Stone Mountain Elementary (Stone Mountain). The purpose of this Traffic Impact Study (TIS) is to discuss the existing traffic patterns at Ranch View and potential mitigation measures for current traffic and potential increased traffic due to increased.

The scope of this TIS includes assessing school driveways, nearby intersections, school parking lots, drop-off and pick-up locations, traffic flow, bicycle and pedestrian facilities, and general traffic challenges at Ranch View.

## 1.2 Study Area

Ranch View Middle School is located at 1731 Wildcat Reserve Parkway in the western region of Highlands Ranch. This is near the intersection of Highlands Ranch Parkway at Wildcat Reserve Parkway. The parcel number for the property is 222916200002 with Ranch View sharing the parcel with ThunderRidge High School (ThunderRidge). A vicinity map showing the school's location is provided as **Figure 1**.



**Figure 1 – Vicinity Map**

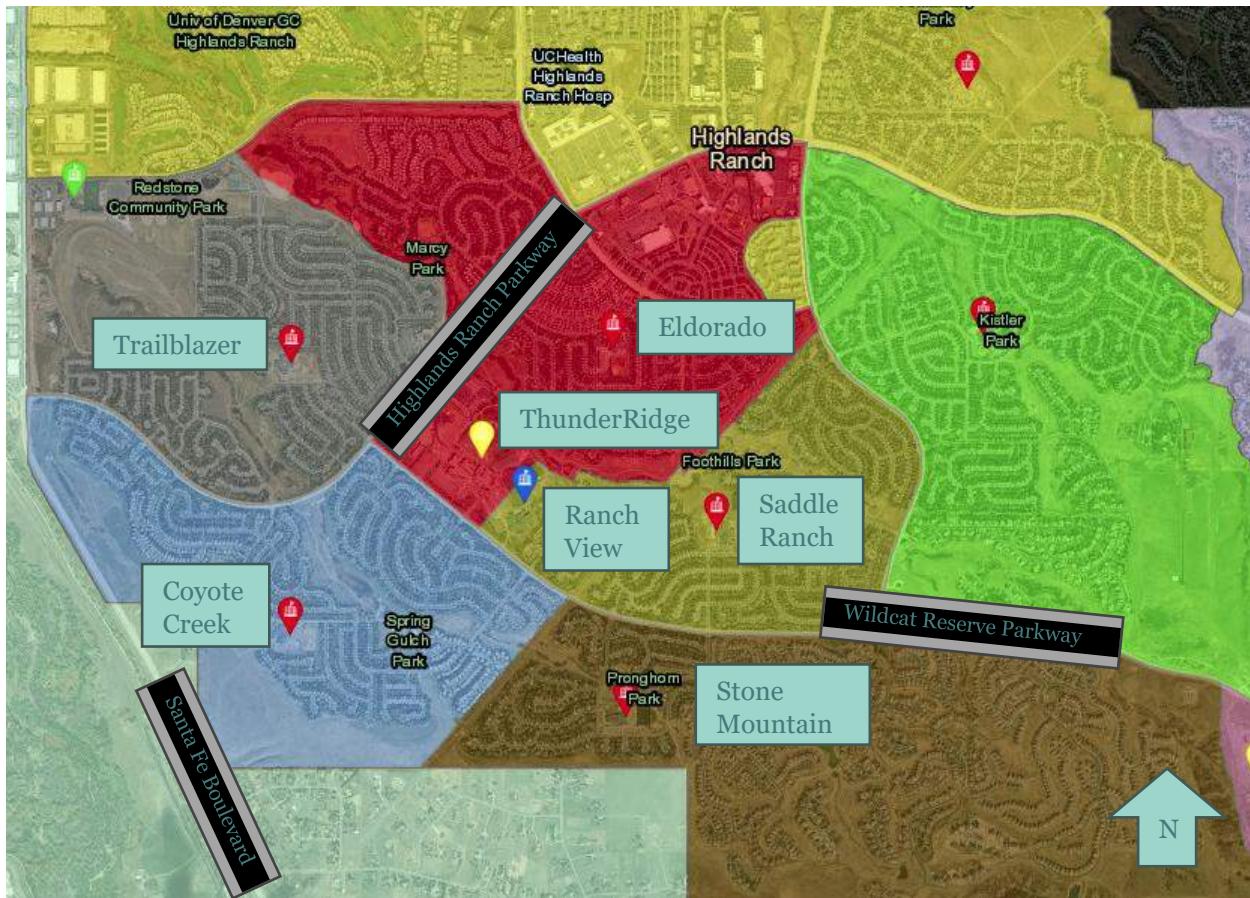
The study area was determined through consultation with Douglas County School District (DCSD) and Douglas County and potentially impacted intersections were identified as follows:

- Highlands Ranch Parkway at Westridge Village Parkway/Deer Creek Street
- Highlands Ranch Parkway at Wildcat Reserve Parkway/Spring Hill Parkway
- Highlands Ranch Parkway at Foothills Canyon Boulevard
- Highlands Ranch Parkway at Desert Willow Road/Westridge Knolls Avenue
- Wildcat Reserve Parkway at Mountain Maple Drive
- Wildcat Reserve Parkway at Ranch View Middle School

### **1.3 School Description**

Ranch View has a start time of 7:30 AM and an end time of 2:45 PM. Ranch View shares a site with ThunderRidge which has an offset start and end time, starting at 7:40 AM and ending at 2:50 PM. The attendance boundaries for the Highlands Ranch elementary schools feeding into Ranch View and ThunderRidge are depicted in **Figure 2**. Trailblazer is depicted in grey, Coyote Creek is depicted in blue, Eldorado is depicted in red, Saddle Ranch is depicted in gold, and Stone Mountain is depicted in brown. In addition, Trailblazer and Coyote Creek serve a portion of the developing Sterling Ranch neighborhood to the southwest which is not depicted in Figure 2. Ranch View has a maximum capacity of 1,785 students but the largest enrollment since 2013 is 1,108 students.

School bus service is provided for individuals within Ranch View's attendance boundary, but is restricted to individuals living more than 2 miles from the school. All areas depicted in **Figure 2** are within 2 miles of Ranch View and do not receive bus service. However, Ranch View is also attended by students in the Sterling Ranch, Solstice, and Roxborough neighborhoods to the southwest. These areas are more than 2 miles away and bus service is provided for the areas. Access to/from these neighborhoods is via Wildcat Reserve Parkway, Highlands Ranch Parkway, and Santa Fe Boulevard. As of November 2024, 277 individuals are eligible to receive bus service, and 214 individuals have used the bus service which is a 77 percent rate.



**Figure 2 – Ranch View Attendance Area**

## 2. EXISTING CONDITIONS

### 2.1 Site Observation

A site observation was performed at Ranch View on November 13, 2024. Field notes from the site observation are included in **Appendix A**. The morning site observation was conducted from 6:45 AM through 8:15 AM and the afternoon site observation was conducted from 1:45 PM through 3:15 PM. Key observations included:

- Illegal U-Turns along Wildcat Reserve Parkway
- High Volume of Vehicles performing Weaving Maneuvers in the Right-Turn Lane Between the Ranch View Access and Mountain Maple Drive
- Afternoon Queue Extends from Ranch View Access, past Hyacinth Road
- Main Parking Lot (Between Ranch View and ThunderRidge) Access is Blocked by Pick-Up and Drop-Off Lot Vehicle Queue
- Entrance at Mountain Maple Drive Queues onto Wildcat Reserve Parkway in the Morning

### 2.2 Roadway Network

The Highlands Ranch roadway network is maintained by Douglas County. Ranch View is situated within a built-out neighborhood and is located on a major arterial street with ThunderRidge and a commercial shopping center to the northwest, open space to the northeast, and residential neighborhoods to the southwest and southeast. The main access is from Wildcat Reserve Parkway via Highlands Ranch Boulevard or Broadway. The main access to the ThunderRidge and Ranch View shared lot is a signalized intersection at Mountain Maple Drive with the other school accesses stop controlled. **Figure 3** identifies the general routes from each elementary neighborhood.

- The Trailblazer students will generally arrive via Spring Hill Parkway northwest of the Highlands Ranch Parkway at Wildcat Reserve Parkway (cyan).
- The Coyote Creek students will generally arrive via Highlands Ranch Parkway northwest of the Highlands Ranch Parkway at Wildcat Reserve Parkway (white).
- The Eldorado students will generally arrive via Highlands Ranch Parkway northeast of the Highlands Ranch Parkway at Wildcat Reserve Parkway (red).
- The Saddle Ranch students will generally arrive via Wildcat Reserve Parkway (yellow).
- The Stone Mountain students will generally arrive via Wildcat Reserve Parkway (brown).



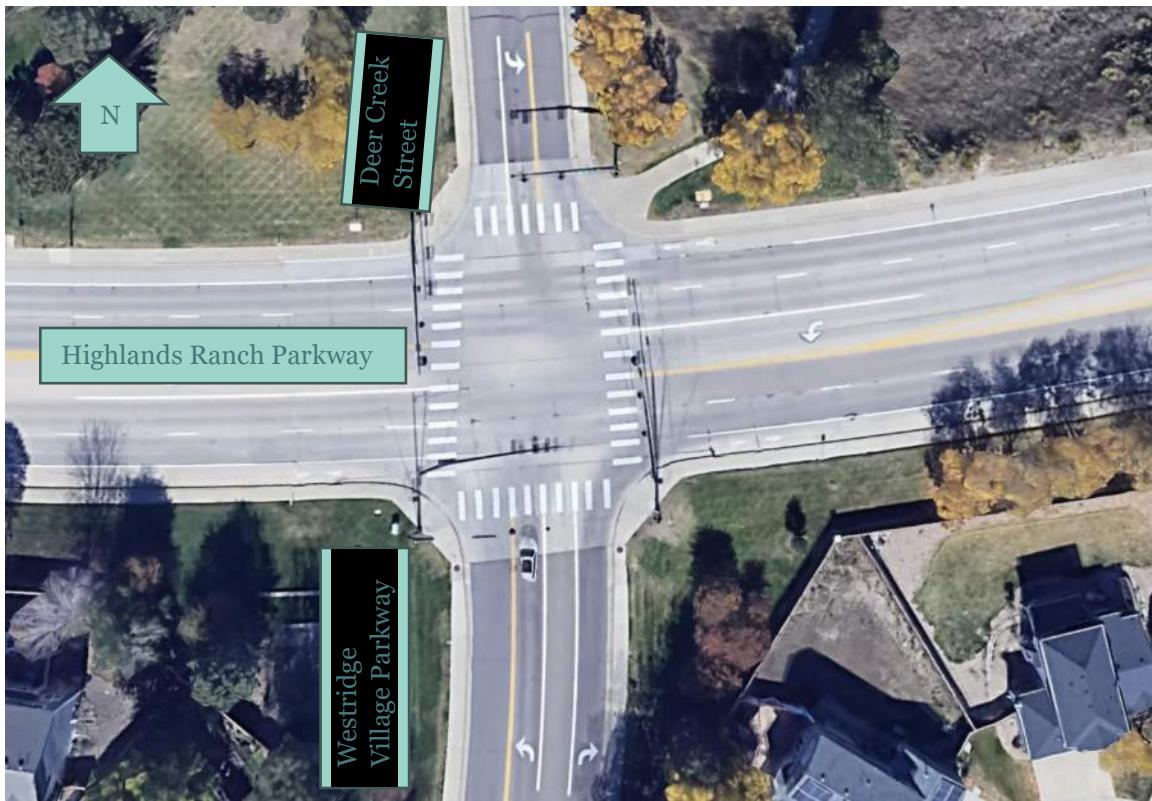
**Figure 3 – Typical Routes to Ranch View**

#### **Highlands Ranch Parkway at Westridge Village Parkway/Deer Creek Street**

The intersection of Highlands Ranch Parkway at Westridge Village Parkway/Deer Creek Street is signalized with protected/permissive left-turn lanes/phases for Highlands Ranch Parkway Traffic and permissive movements for Westridge Village Parkway. **Figure 4** shows an aerial of the intersection with the current intersection layout.

The Highlands Ranch Parkway left-turn lanes have approximately 100 feet of storage length and 100 feet of taper length before transitioning to a striped median. There are two through lanes and bike lanes provided for each direction of traffic with no dedicated right-turn lanes.

Westridge Village Parkway extends to the south and Deer Creek Street extends to the north. Deer Creek Street at the intersection does not widen, but striping is provided for a through/right-turn lane in each direction and a left-turn lane to eastbound Highlands Ranch Parkway. Westridge Village Parkway widens to provide a dedicated right-turn lane, through lane, and left-turn lane with approximately 100 feet of storage. Bike lanes are provided on Westridge Village Parkway, but merge with traffic prior to the intersection.



**Figure 4 – Highlands Ranch Parkway at Westridge Village Parkway/Deer Creek Street**

#### **Highlands Ranch Parkway at Wildcat Reserve Parkway/Spring Hill Parkway**

The intersection of Highlands Ranch Parkway at Wildcat Reserve Parkway is signalized with protected/permissive left-turn lanes/phases all approaches. **Figure 5** shows an aerial of the intersection with the current intersection layout.

Highlands Ranch Parkway left-turn lanes have approximately 125 feet of storage length and 75 feet of taper length for eastbound traffic, and approximately 220 feet of storage length and 80 feet of taper length for westbound traffic, before transitioning to a striped median. There are two through lanes and one bike lane provided for each direction of traffic with a dedicated right-turn lane in each direction. The westbound dedicated right-turn lane is a drop lane starting at Foothills Canyon Boulevard.

Wildcat Reserve Parkway extends to the southeast and Spring Hill Parkway extends to the northwest of the intersection. Each approach provides one through lane and a bike lane in each direction. Wildcat Reserve Parkway has dual dedicated left-turn lanes, which combine to provide approximately 770 feet of storage, and a dedicated right-turn lane. The left-turn lane on Spring Hill Parkway contains 150 feet of storage with a 100 feet taper.



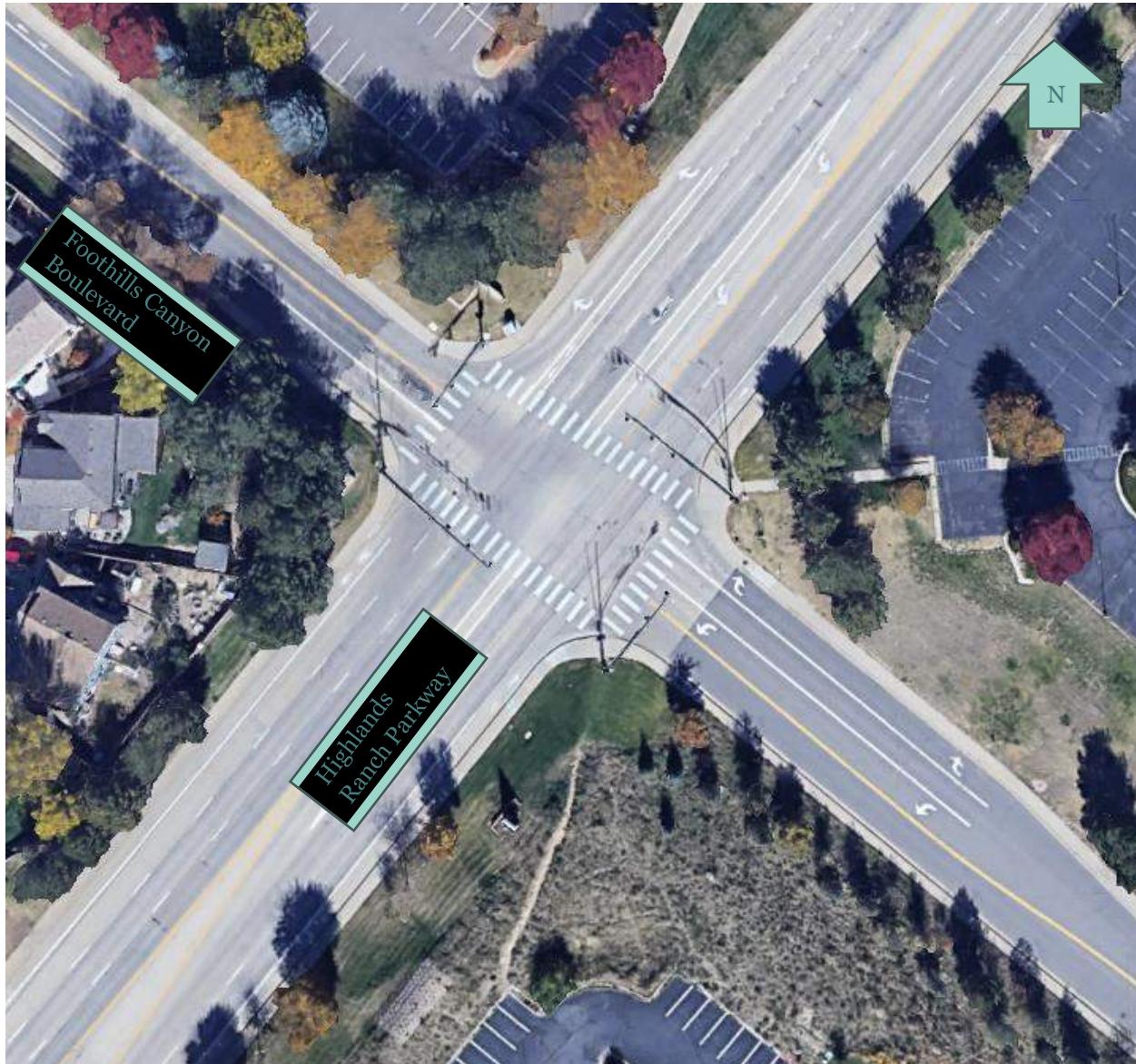
**Figure 5 – Highlands Ranch Parkway at Wildcat Reserve Parkway/Spring Hill Parkway**

#### **Highlands Ranch Parkway at Foothills Canyon Boulevard**

The intersection of Highlands Ranch Parkway at Foothills Canyon Boulevard is signalized with protected/permissive left-turn lanes/phases for traffic on both Highlands Ranch Parkway and on Foothills Canyon Boulevard. **Figure 6** shows an aerial of the intersection with the current intersection layout.

Eastbound Highlands Ranch Parkway has two through lanes and a dedicated left-turn lane. The left-turn lane has approximately 140 feet of storage length with 60 feet of taper length, before transitioning to a striped median. There is no dedicated right-turn lane. Westbound Highlands Ranch Parkway has two through lanes with a dedicated left-turn lane. The left-turn lane has approximately 180 feet of storage length with 100 feet of taper length, before transitioning to a striped median. There is a dedicated right-turn lane with 120 feet of storage length and a 200 feet taper length. Highlands Ranch Parkway has a bike lane for each direction.

Northbound Foothills Canyon Boulevard has one through lane and a dedicated right-turn lane with approximately 170 feet of storage length and 110 feet of taper length. The left-turn lane has approximately 170 feet of storage length and 80 feet of taper length. Southbound Foothills Canyon Parkway has a shared through and right-turn lane and a dedicated left-turn lane. The dedicated left-turn lane has approximately 100 feet of storage length and 100 feet of taper length. There is a bike lane in each direction, but they merge with vehicle traffic lanes prior to the intersection.



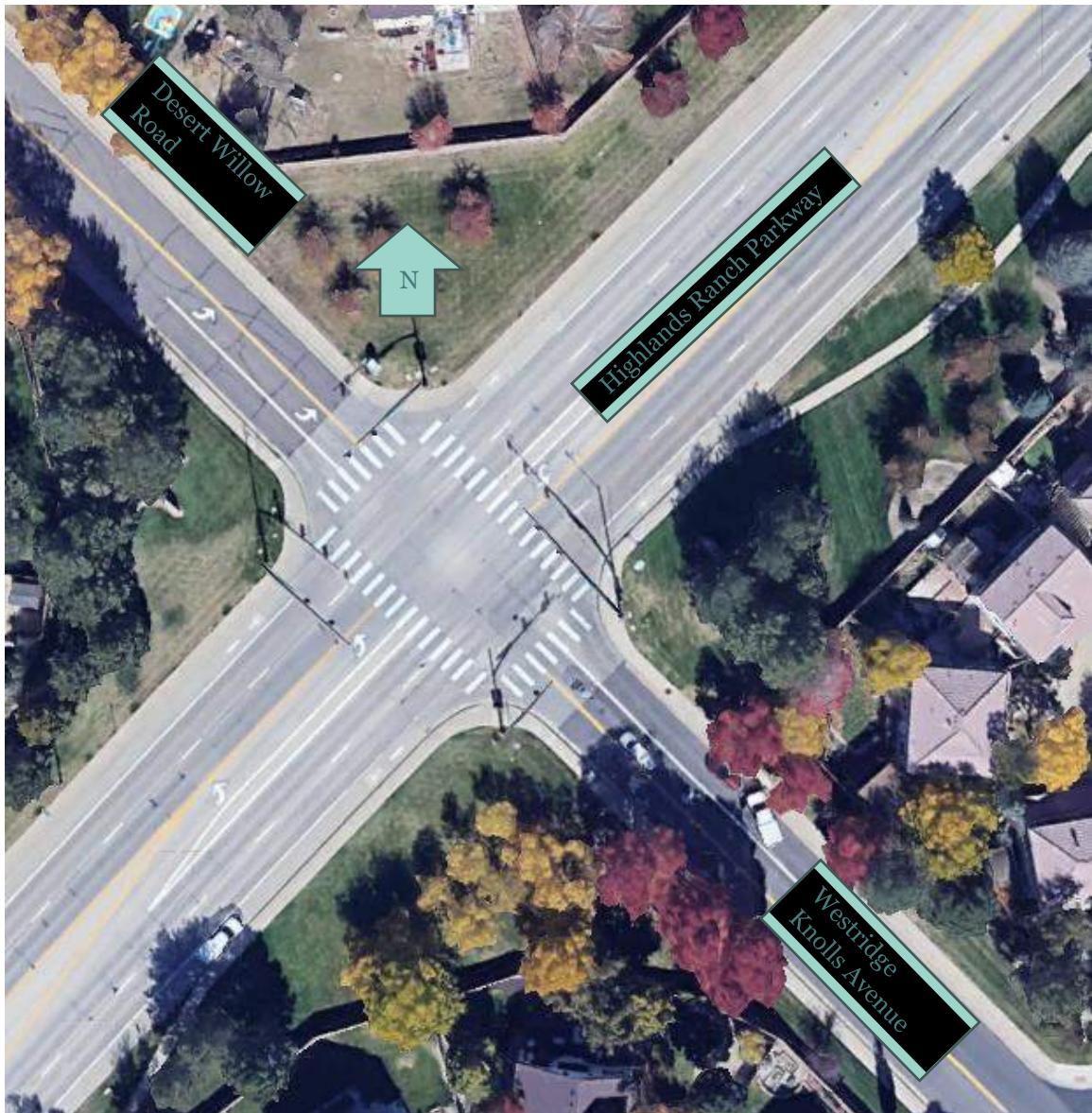
**Figure 6 – Highlands Ranch Parkway at Foothills Canyon Boulevard**

#### **Highlands Ranch Parkway at Desert Willow Road/Westridge Knolls Avenue**

The intersection of Highlands Ranch Parkway at Westridge Knolls Avenue is signalized with permissive left-turn lanes/phases for all approaches. **Figure 7** shows an aerial of the intersection with the current intersection layout.

Eastbound Highlands Ranch Parkway has two through lanes and a dedicated left-turn lane. The left-turn lane has approximately 140 feet of storage with a 90-foot taper before transitioning to a striped median. There is no dedicated right-turn lane. Westbound Highlands Ranch Parkway has two through lanes with a dedicated left-turn lane. The left-turn lane has approximately 130 feet of storage with a 150-foot taper before transitioning to a striped median. There is no dedicated right-turn lane on this approach. There is a bike lane in each direction on Highlands Ranch Parkway.

Northbound Westridge Knolls Avenue has one through lane and a dedicated left-turn lane with approximately 145 feet of storage and a 45-foot taper. Southbound Desert Willow Road has a shared through and right-turn lane. The dedicated left-turn lane has approximately 90 feet of storage and a 50 foot taper. Bike lanes are present on Westridge Knolls Avenue, but they merge with vehicle traffic prior to the intersection.



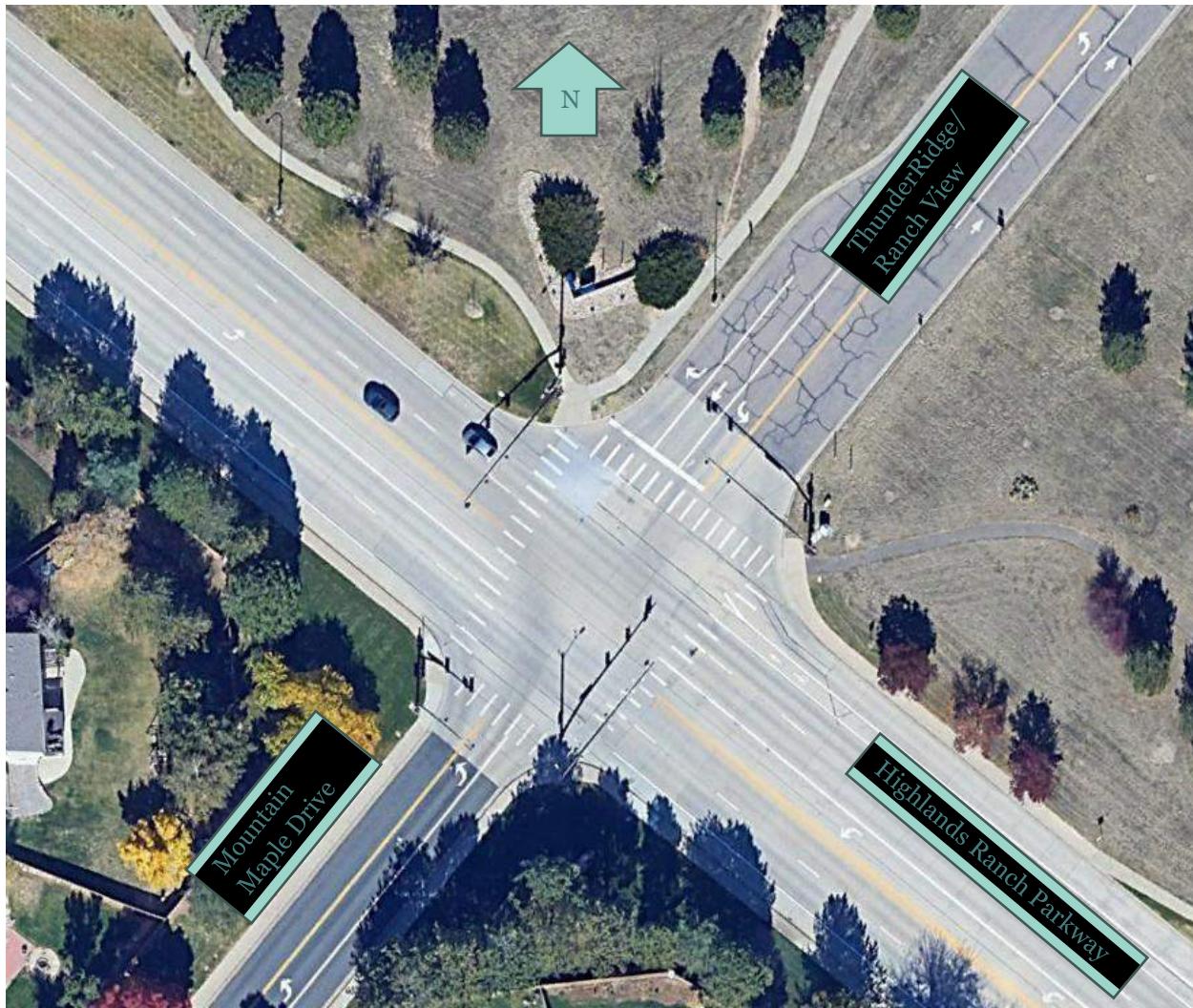
**Figure 7 – Highlands Ranch Parkway at Desert Willow Road/Westridge Knolls Avenue**

### **Wildcat Reserve Parkway at Mountain Maple Drive/Ranch View-ThunderRidge**

The intersection of Wildcat Reserve Parkway at Mountain Maple Drive is signalized with protected/permissive left-turn lanes/phases for the Wildcat Reserve Parkway approaches and permissive left-turns/phases for Mountain Maple and the school access. **Figure 8** shows an aerial of the intersection with the current intersection layout.

Eastbound Wildcat Reserve Parkway has two through lanes and a dedicated left-turn lane. The left-turn lane has approximately 630 feet of storage with a 150-foot taper before transitioning to a striped median. There is no dedicated right-turn lane. Westbound Wildcat Reserve Parkway has two through lanes with a dedicated left-turn lane and a dedicated right-turn lane. The left-turn lane has approximately 200 feet of storage with a 130-foot taper before transitioning to a striped median. The dedicated right-turn lane is a continuation of the exit from the Ranch View access to the east, approximately 700-feet away. There is a bike lane in each direction on Wildcat Reserve Parkway.

Northbound Mountain Maple Drive has one shared through/right-turn lane and a dedicated left-turn lane with approximately 200 feet of storage. Southbound is the access from ThunderRidge and Ranch View where a single lane splits to a dedicated through lane, a left-turn lane, and a right-turn lane approximately 100-feet prior to the intersection. Bike lanes are not present on Mountain Maple Drive or the school access.



**Figure 8 – Wildcat Reserve Parkway at Mountain Maple Drive/Ranch View-ThunderRidge**

### Wildcat Reserve Parkway at Ranch View

The intersection of Wildcat Reserve Parkway at Ranch View is an unsignalized three-way intersection. The intersection is a right-in/right-out only for Ranch View with a concrete median along Wildcat Reserve Parkway. **Figure 9** shows an aerial of the intersection with the current intersection layout.

Wildcat Reserve Parkway has two through lanes and a bike lane in each direction. There is a right-turn lane into Ranch View with approximately 150-feet of storage and 150-feet of taper. The exit from Ranch creates a new lane that transitions to the westbound right-turn lane at the Mountain Maple Drive intersection.



**Figure 9 – Wildcat Reserve Parkway at Ranch View**

## Roadway Characteristics

General features of the arterial roadways along the most likely route to Ranch View are summarized in **Table 1**

**Table 1 – Roadway Characteristics**

Roadway	Highlands Ranch Parkway	Wildcat Reserve Parkway	Broadway
Speed Limit	45 mph	45 mph	45 mph
Number of Through Lanes	4	4	4 to 6
Lane Width	12 feet	12 feet	12 feet
Bike Lane Width	4-5 feet	5 feet	6 feet
Median	Striped	Striped	Striped
On-Street Parking	None	None	None

## 2.3 Traffic Volumes

Traffic data collection was conducted by Rekor Systems (All Traffic Data) on Wednesday, November 13, 2024. Traffic volumes were collected at the following applicable intersections:

- Highlands Ranch Parkway at Westridge Village Parkway/Deer Creek Street
- Highlands Ranch Parkway at Wildcat Reserve Parkway/Spring Hill Parkway
- Highlands Ranch Parkway at Foothills Canyon Boulevard
- Highlands Ranch Parkway at Desert Willow Road/Westridge Knolls Avenue
- Wildcat Reserve Parkway at Mountain Maple Drive
- Wildcat Reserve Parkway at Ranch View Middle School

Traffic count data is summarized in **Table 2** and is included in **Appendix B**. The existing traffic is shown in **Figure 10**.

## 2.4 Existing Level of Service

The existing capacity analysis for the key intersections included in **Table 2** was evaluated using Synchro 11 Software (Synchro). The resulting level of service (LOS) and delay are summarized in **Table 10** provided in **Section 4** of this report for comparison to the future projected traffic capacity analysis.

Existing traffic signal timing plans provided by Douglas County are included in **Appendix C**.

Level of service reports from Synchro are included in **Appendix D**.

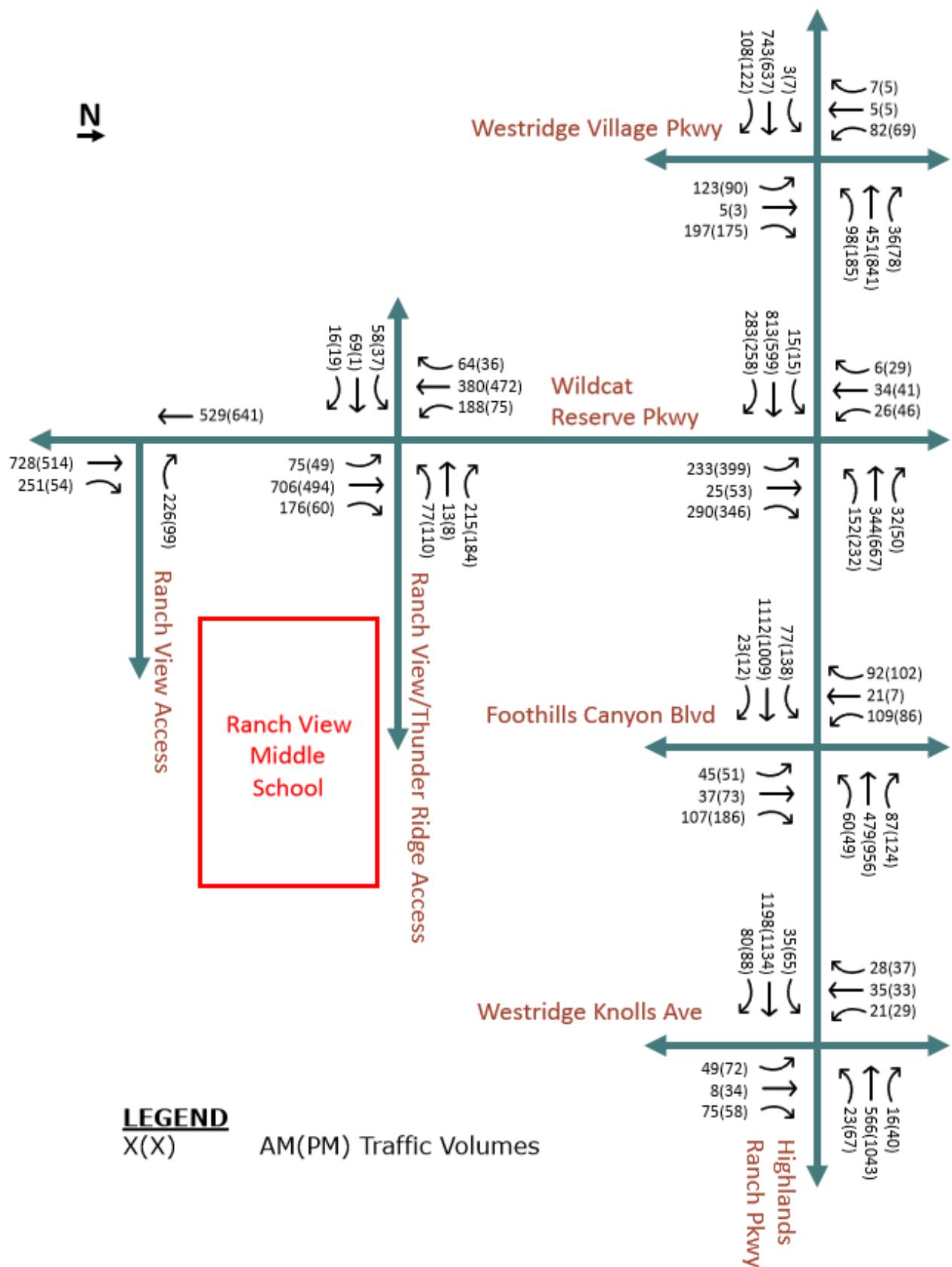
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Figure 10 – Existing Traffic

**Table 2 – Traffic Volume Summary**

Intersection	Peak Hour	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Highlands Ranch Pkwy & Westridge Village Pkwy	AM	3	743	108	98	451	36	123	5	197	82	5	7
	PM	7	637	122	185	841	78	90	3	175	69	5	5
Highlands Ranch Pkwy & Westridge Knolls Ave / Desert Willow Rd	35	1198	80	23	566	16	49	8	75	21	35	28	35
	65	1134	88	67	1043	40	72	34	58	29	33	37	65
Highlands Ranch Pkwy & Foothills Canyon Blvd	AM	77	1112	23	60	479	87	45	37	107	109	21	92
	PM	138	1009	12	49	956	124	51	73	186	86	7	102
Spring Hill Pkwy & Highlands Ranch Pkwy	15	813	283	152	344	32	233	25	290	26	34	6	15
	15	599	258	232	667	50	399	53	346	46	41	29	15
Wildcat Reserve Pkwy & Thunder Ridge Access / Mountain Maple Ln	58	69	16	77	13	215	75	706	176	188	380	64	58
	37	1	19	110	8	184	49	494	60	75	472	36	37
Wildcat Reserve Pkwy & Ranch View Access	0	0	0	0	0	226	0	728	251	0	529	0	0
	0	0	0	0	0	99	0	514	54	0	641	0	0

## 2.5 Traffic Safety Analysis

### Intersection Crash Analysis

Crash history was reviewed at the intersections of Highlands Ranch Parkway at Wildcat Reserve Parkway, Highlands Ranch Parkway at Foothills Canyon Boulevard, and Highlands Ranch Parkway at Westridge Knolls Avenue. Crashes were reviewed for the period between 2019 and 2024. **Table 3** Summarizes the year-by-year crash data for the intersections.

Crash diagrams and a listing of crashes are provided in **Appendix E**.

#### Highlands Ranch Parkway and Westridge Village Parkway/Deer Creek Street

There was a total of 18 crashes at Highlands Ranch Parkway and Wildcat Reserve Parkway over the course of the study period. Five of these involved injuries. It is not known how many of these accidents involved a left-turn, how many were at night, or how many involved a 3<sup>rd</sup> vehicle or bicycle.

#### Highlands Ranch Parkway at Wildcat Reserve Parkway/Spring Hill Parkway

There was a total of 42 crashes at Highlands Ranch Parkway and Wildcat Reserve Parkway over the course of the study period. Nine of these involved injuries. Of the 42 crashes, 22 involved a left-turn, and 6 were at night. Two of these accidents involved a 3<sup>rd</sup> vehicle and one involved a bicycle.

#### Highlands Ranch Parkway at Foothills Canyon Boulevard

There was a total of 37 crashes at Highlands Ranch Parkway and Foothills Canyon Boulevard over the course of the study period. Six of these involved injuries. Of the 37 crashes, 12 involved a left-turn, and 6 were at night. Two of these accidents involved a 3<sup>rd</sup> vehicle and two involved a bicycle.

### Highlands Ranch Parkway at Desert Willow Road/Westridge Knolls Avenue

There was a total of 22 crashes at Highlands Ranch Parkway and Westridge Knolls Avenue over the course of the study period. Five of these involved injuries. Of the 22 crashes, 5 involved a left-turn, and 3 were at night. One of these accidents involved a bicycle and none involved a 3<sup>rd</sup> vehicle. Four of the five left-turn accidents resulted in injuries.

### Wildcat Reserve Parkway at Mountain Maple Drive

There was a total of four crashes at Wildcat Reserve Parkway and Mountain Maple Drive over the course of the study period. Three of the crashes were rear ends or sideswipes related to turning right from Wildcat Reserve Parkway to the schools. The other was turning left from Wildcat Reserve Parkway to Mountain Maple. All the crashes were reported in 2023 and none of the crashes had injuries reported.

**Table 3 – Annual Crash Summary**

Year	Highlands Ranch Pkwy & Westridge Village Pkwy	Highlands Ranch Pkwy & Wildcat Reserve Pkwy	Highlands Ranch Pkwy & Foothills Canyon Blvd	Highlands Ranch Pkwy & Westridge Knolls Ave	Wildcat Reserve Parkway & Mountain Maple Drive
2019	3	8	5	6	0
2020	2	5	2	5	0
2021	2	8	7	3	0
2022	4	10	6	1	0
2023	3	6	11	2	4
2024	4	5	6	5	0

### **School Safety**

Students are picked up and dropped off in two areas with the primary pick-up and drop-off area being the Ranch View parking lot accessed from the right-in/right-out Wildcat Reserve Parkway access. The parking lot access has a crosswalk for the Wildcat Reserve Parkway sidewalk. Vehicle queues extend past this crosswalk at times, blocking pedestrians from crossing. A sidewalk leads from Wildcat Reserve Parkway on the east side of access to the school. The parking lot pick-up and drop-off is a loop pattern with vehicles turning right into the parking lot, stopping in front of the school, looping the parking lot, and turning right back onto Wildcat Reserve Parkway.

The second pick-up and drop-off area is within the parking lot between Ranch View and ThunderRidge. This parking lot is accessed from Wildcat Reserve Parkway via the Mountain Maple Drive intersection. Two lanes extend into the parking lot from Wildcat Reserve Parkway; however, they split internal to the site with one leading to the pick-up/drop-off parking lot and one leading to the ThunderRidge visitor parking. Therefore, only one lane of traffic leads to the pick-up/dropoff parking lot which gets blocked by the pick-up/drop-off queue, limiting access to the parking lot.

## **3. TRIP PROJECTIONS**

### **3.1 Projected Traffic**

DCSD is considering relocating 6<sup>th</sup> grade students from Trailblazer, Coyote Creek, Eldorado, Saddle Ranch, and Stone Mountain to Ranch View. This would increase the enrollment at Ranch View. **Table 4** provides data on student enrollment for the elementaries with the total 6<sup>th</sup> grade enrollment combined. **Table 5** provides data on the Ranch View enrollment and the increase expected with the 6<sup>th</sup> grade added.

The projected 2028-2029 combined enrollment at Ranch View with 6<sup>th</sup> grade is 1,080 students, which is greater than the maximum historic enrollment, but less than the ideal building capacity.

**Table 4 – Elementary School Enrollment**

School	Ideal Capacity per DCSD	Maximum Historic Enrollment	2023-2024 Enrollment*	2023-2024 6 <sup>th</sup> Grade Enrollment**	Projected 2028-2029 Enrollment*	Projected 2028-2029 Enrollment**
Trailblazer	437	508	314	41	403	54
Coyote Creek	506	502	502	68	808	105
Eldorado	506	588	404	54	387	51
Saddle Ranch	529	599	368	48	305	39
Stone Mountain	713	672	491	67	343	46
Combined	-	-	-	278	-	295

\*Enrollment values include Pre-School through 6<sup>th</sup> Grade.

\*\*6<sup>th</sup> Grade enrollment assumed to be 1/7 of Kindergarten through 6<sup>th</sup> grade enrollment.

**Table 5 – Ranch View School Enrollment**

School	Ideal Capacity per DCSD	Maximum Historic Enrollment	2023-2024 Enrollment* (7-8)	Projected 2028-2029 Enrollment* (7-8)	Projected 2028-2029 Enrollment** (6-8)
Ranch View	1,111	1,007	810	785	1,080

\*Enrollment values include 7<sup>th</sup> and 8<sup>th</sup> grade.

\*\*Enrollment values include 6<sup>th</sup>, 7<sup>th</sup>, and 8<sup>th</sup> grades.

## 3.2 Trip Generation

Trip generation calculations were performed based on the number of 6<sup>th</sup> grade students that will be transferring from the five elementary schools to Ranch View. It was assumed that the 6<sup>th</sup> grade class makes up about 1/7<sup>th</sup> of the enrollment at each school and thus 1/7<sup>th</sup> of the existing trips to and from each elementary school. For the purposes of this report, it is assumed the existing 2024 enrollment for Ranch View will see negligible changes by the 2025-2026 school year. Therefore, the trip generation calculations do not focus on the total future enrollment for Ranch View with the addition of 6<sup>th</sup> grade students. The trip generation calculations are therefore only based on each elementary's existing traffic and enrollment. The trip generation was calculated multiple ways to account for the transfer of 6<sup>th</sup> grade students to Ranch View. First the Institute of Transportation Engineers (ITE) Trip Generation web-based application was used to calculate the trip generation for land use code 522 for Middle School/Junior High School.

The relocation of students from one elementary school to the other has similarities to this land use evaluated using the ITE Trip Generation approach, however, this is a slightly unique scenario with school busing and a younger group of students transferring to middle school. Therefore, a second, unique approach was evaluated using existing traffic data and field observations for the surrounding area to understand the current traffic demand at the elementary schools and how that traffic demand is anticipated to change when relocated to Ranch View. Traffic data for the access points was readily available for three of the elementary schools (Trailblazer, Coyote Creek and Eldorado). Traffic data was not collected at Saddle Ranch or Stone Mountain. This information was used to get an idea of the typical number of trips to/from the three schools during pick-up and drop-off times. Taking an average of the

percentage of trips during pick-up and drop-off at each of the three schools compared to total enrollment, the average percentage was applied to Saddle Ranch and Stone Mountain to get an idea of anticipated trips for each of those schools. The following considerations were taken into account to determine the anticipated number of trips for the three elementary schools:

- Calculate the existing ingress and egress traffic for parent drop-off and pick-up in the designated parking areas (parking lot and bus areas) using the existing traffic data collected
- Field observations of street parking adjacent to the school for drop-off and pick-up of students
- Estimation of trips from adjacent on-street parking based on field observations and available space for street-parking
- Students walking or riding a bike to/from the school using the existing traffic data collected
- Current bus ridership
- New bus ridership eligibility (outside 1 mile radius)
- Anticipated number of students “carpooling” with siblings or classmates after subtracting trips accounted for with existing traffic data, bus ridership, pedestrians/bicyclists and estimated street parking drop-off/pick-up from the student population.
- Dividing the total traffic by 1/7<sup>th</sup> to estimate the trips for 6<sup>th</sup> grade only.

The results of these considerations are summarized in the following table:

**Table 6 – Elementary School Traffic Considerations**

School	Peak Hour	Enrollment	Existing Bus Riders	Estimated Ingress/Egress	Ped & Bikes	Estimated Street Parking	Calculated Carpooling
Trailblazer	AM	314	14	137	39	49	75
	PM			112	83		56
Coyote Creek	AM	502	141	171	64	26	100
	PM			99	106		130
Eldorado	AM	404	0	159	7	61	177
	PM			102	68		173
Saddle Ranch	AM	368	0	188	37	63	81
	PM			143	86		76
Stone Mountain	AM	491	67	250	37	46	91
	PM			191	86		102

When the 6<sup>th</sup> graders are relocated to the middle school, the bus eligibility radius increases from one mile to two miles. The two-mile radius encompasses the same areas that the one-mile radius does for each elementary school. It is therefore assumed that bus ridership percentages for 6<sup>th</sup> grade students will be the same as existing Ranch View ridership percentages.

Students who currently walk to the elementary schools are unlikely to walk to Ranch View due to distance and crossing of major roadways instead of local neighborhood streets, therefore, it is assumed that these students will now be driven to school and count as a new vehicular trip to Ranch View. Taking into account the estimated street parking trips, the estimated ingress/egress trips, estimated pedestrians and bicyclists converted to vehicle trips, and anticipated carpooling, the resulting increase in trip demand for

Ranch View is about **344** trips during the morning peak hour and **336** trips during the afternoon peak hour.

A summary of the trip generation by elementary school is summarized in **Table 7** followed by a trip generation comparison to the ITE Trip General Manual Calculation summarized in **Table 8**.

**Table 7 – Trip Generation by School**

**Table 8 – Trip Generation Comparison to ITE**

<b>ITE LUC</b>	<b>Description</b>	<b>Units</b>	<b>Quant</b>	<b>AM Peak - Generator Peak</b>			<b>PM Peak - Generator Peak</b>		
				<b>Total</b>	<b>Ingress</b>	<b>Egress</b>	<b>Total</b>	<b>Ingress</b>	<b>Egress</b>
-	Existing Data Based Calculation	Students	297	344	172	172	336	168	168
522	Middle School/Junior High School	Students	297	223	120	102	134	61	72

### **3.3 Trip Distribution/Assignment**

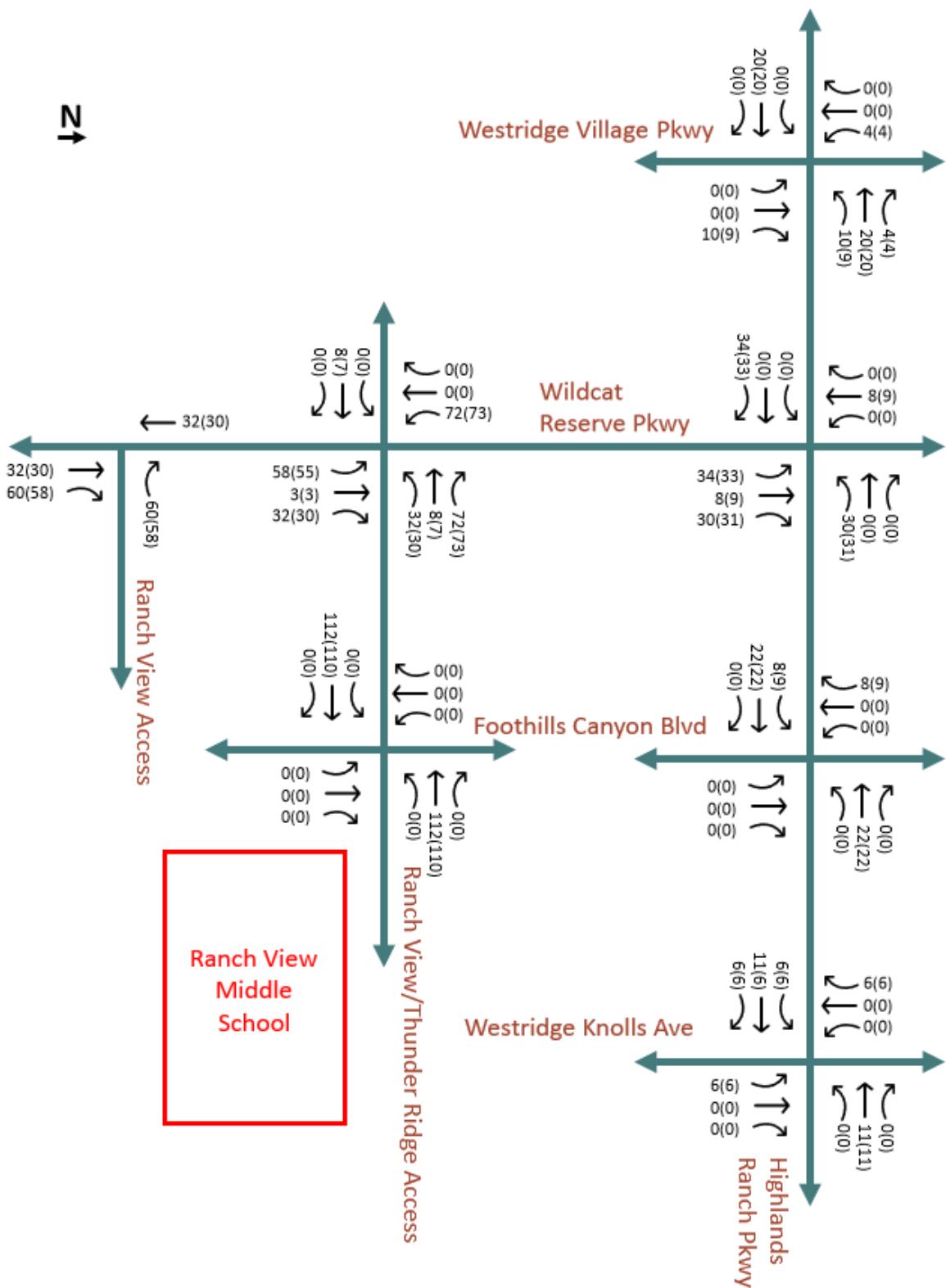
The trip distribution and assignment were evaluated for each of the five elementary schools by first reviewing the attendance boundaries for an elementary school to get an idea of the population density within the boundary limits. Then the distribution of traffic within an elementary school boundary and the directions of approach for arriving at Ranch View was estimated by percentage. This approach was applied to each of the five elementary schools. The resulting Trip Distribution percentages for each school are provided in **Appendix G**.

Based on the Trip Distribution for each school, the trip turning movements were then assigned to the key intersections evaluated as a part of this TIS for each school.

- Highlands Ranch Parkway at Westridge Village Parkway/Deer Creek Street
- Highlands Ranch Parkway at Wildcat Reserve Parkway/Spring Hill Parkway
- Highlands Ranch Parkway at Foothills Canyon Boulevard
- Highlands Ranch Parkway at Desert Willow Road/Westridge Knolls Avenue
- Wildcat Reserve Parkway at Mountain Maple Drive
- Wildcat Reserve Parkway at Ranch View Middle School

The resulting trip assignment for each school were then added together for a total anticipated trip assignment at the key intersection for the 6<sup>th</sup> graders from all five elementary schools combined. is shown in **Figure 11**.

D



## LEGEND

### X(X) AM(PM) Traffic Volumes

## **Figure 11 – Trip Assignment**

In addition to the new anticipated trips for the 6<sup>th</sup> grade transfer to Ranch View, the existing trips to each elementary school for the 6<sup>th</sup> grade students will also be removed for several of the key intersections. Certain turning movements accounting for the current trips related to 6<sup>th</sup> grade students would be reduced in this new scenario. Using the trip distribution and the existing distribution of ingress and egress trips for each elementary school, the anticipated reduction for certain turning movements was estimated. The resulting reductions are summarized in **Table 9**.

**Table 9 – Turning Movement Reductions**

Intersection	Peak Hour	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Highlands Ranch Pkwy & Westridge Village Pkwy	AM		-1				-1				-1		
	PM					-1	-1						
Highlands Ranch Pkwy & Westridge Knolls Ave (Desert Willow Rd)	AM			-8	-2			-3		-5		-4	
	PM			-3	-3			-3	-1	-2		-1	
Highlands Ranch Pkwy & Foothills Canyon Blvd	AM	-3	-4		-2	-1				-4			-2
	PM	-4	-3		-2	-1				-2			-3
Spring Hill Pkwy & Highlands Ranch Pkwy	AM	-1			-1		-2		-2	-4	-3	-3	-1
	PM	-1			-1		-3		-3	-1	-4	-3	-2

## 4. PROJECTED SITE TRAFFIC IMPACTS

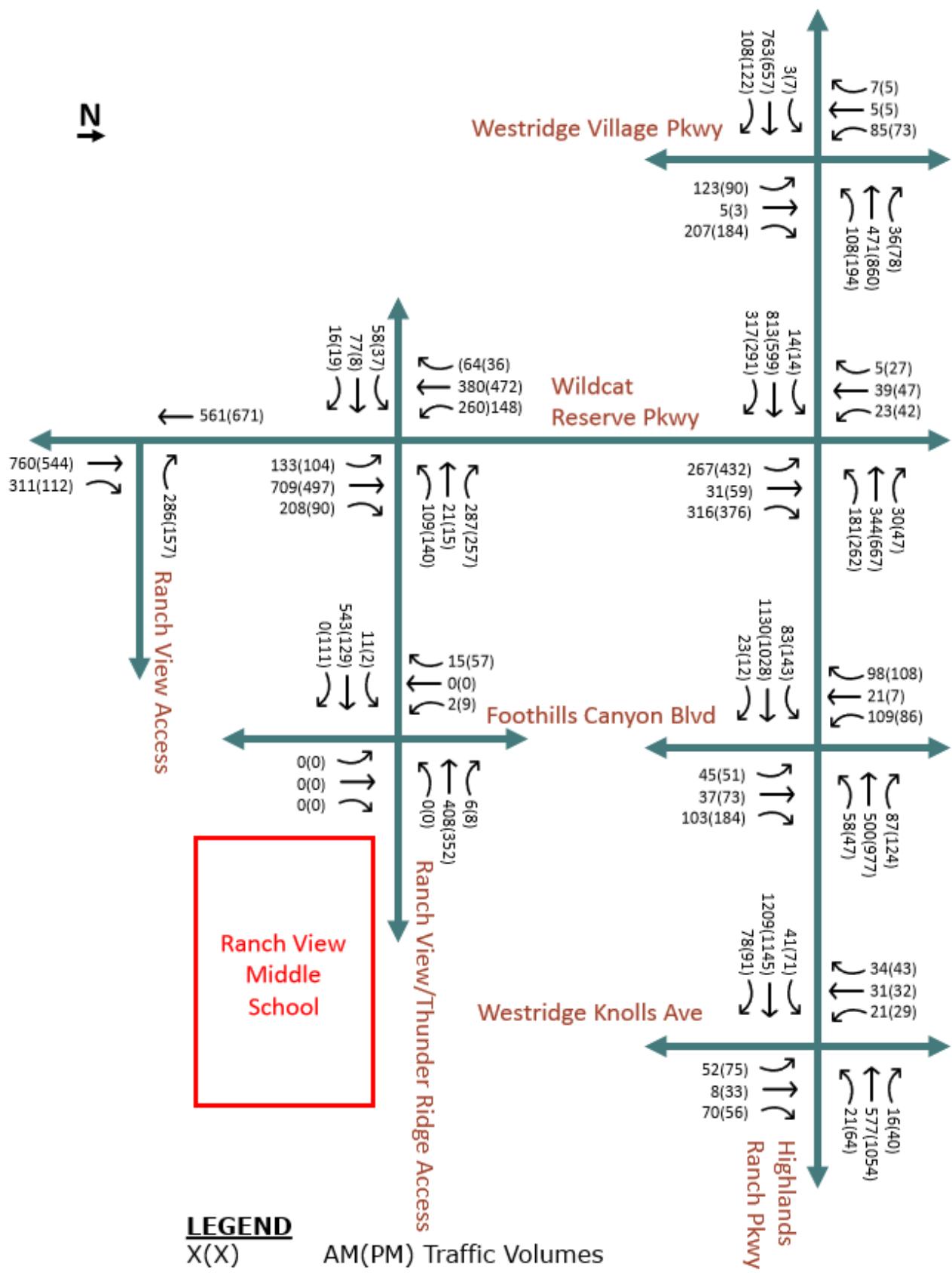
### 4.1 Total Traffic (2028-2029 School Year)

The total anticipated future traffic for the 2028 to 2029 school year for Ranch View with the addition of Trailblazer students was calculated by adding the trip assignment to the existing Ranch View traffic data and then subtracting the anticipated turning movement reductions. The resulting total traffic is shown in **Figure 12**.

### 4.2 Projected Level of Service

The capacity analysis for the total projected traffic from the transfer of 6<sup>th</sup> grade students to Ranch View was evaluated using Synchro. The resulting LOS and delay are summarized in **Table 10**. Project level of service reports from Synchro are included in **Appendix F**.

D



**Figure 12 – Total Traffic**

Table 10 – LOS and Delay Results

Intersection	Control	Movement	Existing						Total Traffic							
			LOS		Delay (s)		Queue Length (ft)		LOS		Delay (s)		Delay Delta (s)			
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		
Highlands Ranch Pkwy & Westridge Village Pkwy	Signal	Overall	C	B	20.1	19.0	-	-	C	B	20.4	19.2	+0.3	+0.2	-	-
		NBL	D	C	36.7	30.2	95	72	D	C	36.7	30.2	0.0	0.0	95	72
		NBT	C	C	22.8	22.7	9	6	C	C	22.8	22.7	0.0	0.0	9	6
		NBR	A	A	9.1	6.2	1	0	B	A	10.4	6.2	+1.3	0.0	7	0
		SBL	C	C	27.0	27.2	74	60	C	C	27.2	27.5	+0.2	+0.3	76	63
		SBT	B	B	16.2	17.0	15	12	B	B	16.2	17.0	0.0	0.0	15	12
		SBR	B	B	16.2	17.0	36	12	B	B	16.2	17.0	0.0	0.0	15	12
		EBL	A	A	5.3	5.6	3	6	A	A	5.3	5.6	0.0	0.0	3	6
		EBT	C	B	22.7	19.3	244	212	C	B	23.2	19.6	+0.5	+0.3	252	220
		EBR	C	B	22.7	19.3	244	212	C	B	23.2	19.6	+0.5	+0.3	252	220
		WBL	A	A	8.3	9.9	36	64	A	B	9.0	10.6	+0.7	+0.7	39	67
		WBT	B	C	16.8	21.8	129	279	B	C	17.0	22.3	+0.2	+0.5	135	288
		WBR	B	C	16.8	21.8	129	279	B	C	17.0	22.3	+0.2	+0.5	135	288
Highland Ranch Pkwy & Spring Hill Parkway	Signal	Overall	D	C	42.3	29.3	-	-	D	C	41.8	29.3	-0.5	0.0	-	-
		NBL	C	C	21.5	23.1	87	134	C	C	21.9	23.6	+0.4	+0.5	99	164
		NBT	C	C	29.8	30.5	36	38	C	C	30.0	30.7	+0.2	+0.2	41	70
		NBR	A	A	5.4	6.4	1	11	A	A	7.2	8.2	+1.8	+1.8	16	65
		SBL	C	C	24.4	25.3	26	36	C	C	24.2	25.0	-0.2	-0.3	23	40
		SBT	D	D	50.8	46.6	54	74	D	D	53.0	49.9	+2.2	+3.3	61	89
		SBR	D	D	50.8	46.6	54	74	D	D	53.0	49.9	+2.2	+3.3	61	89
		EBL	C	C	20.3	20.5	21	21	C	C	20.3	20.4	0.0	-0.1	20	20
		EBT	F	D	83.6	48.5	541	325	F	D	83.6	48.5	0.0	0.0	541	325
		EBR	C	B	20.8	10.9	178	105	C	B	23.5	11.1	+2.7	+0.2	209	117
		WBL	C	C	20.8	21.9	60	91	C	C	21.3	22.3	+0.5	+0.4	71	101
		WBT	C	D	33.1	39.4	164	343	C	D	33.1	39.4	-0.0	0.0	164	343
		WBR	A	A	0.2	0.3	0	0	A	A	0.2	0.3	0.0	0.0	0	0
Highlands Ranch Pkwy & Foothills Canyon Blvd	Signal	Overall	C	B	20.7	19.3	-	-	C	B	20.9	19.6	+0.2	+0.3	-	-
		NBL	C	C	27.8	25.5	35	43	C	C	28.0	25.6	+0.2	+0.1	35	43
		NBT	C	C	23.9	24.5	29	56	C	C	23.9	24.5	0.0	0.0	29	56
		NBR	B	B	18.9	18.6	9	51	B	B	18.1	18.6	-0.8	0.0	7	51
		SBL	C	C	27.2	26.0	94	76	C	C	27.2	26.0	0.0	0.0	94	76
		SBT	A	A	8.1	6.4	41	32	A	A	7.9	6.3	-0.2	-0.1	41	33
		SBR	A	A	8.1	6.4	41	32	A	A	7.9	6.3	-0.2	-0.1	41	33
		EBL	A	B	8.7	17.2	37	58	A	B	8.8	19.6	+0.1	+2.4	39	62
		EBT	C	C	25.3	20.8	372	297	C	C	25.9	21.1	+0.6	+0.3	381	305
		EBR	C	C	25.3	20.8	372	297	C	C	25.9	21.1	+0.6	+0.3	381	305
		WBL	B	A	12.3	9.7	29	26	B	A	12.1	9.7	-0.2	0.0	28	25
		WBT	B	C	15.5	20.4	122	284	B	C	15.7	20.7	+0.2	+0.3	128	293
		WBR	A	A	3.6	4.7	25	37	A	A	3.6	4.9	0.0	+0.2	25	38

Continued																
Intersection	Control	Movement	Existing						Total Traffic							
			LOS		Delay (s)		Queue Length (ft)		LOS		Delay (s)		Delay Delta (s)		Queue Length (ft)	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Highland Ranch Pkwy & Desert Willow Road	Signal	Overall	C	C	28.5	31.0	-	-	C	C	29.0	32.0	+0.5	+1.0	-	-
		NBL	B	B	15.1	16.3	39	54	B	B	15.2	16.3	+0.1	0.0	41	56
		NBT	B	B	12.6	12.6	52	56	B	B	12.6	12.6	0.0	0.0	49	54
		NBR	B	B	12.6	12.6	52	56	B	B	12.6	12.6	0.0	0.0	49	54
		SBL	B	B	14.5	15.3	21	27	B	B	14.5	15.3	0.0	0.0	21	27
		SBT	A	B	9.6	10.5	36	40	A	B	8.6	10.9	-1.0	+0.4	35	44
		SBR	A	B	9.6	10.5	36	40	A	B	8.6	10.9	-1.0	+0.4	35	44
		EBL	B	F	17.3	80.9	34	118	B	F	17.8	105.9	+0.5	+25.0	39	129
		EBT	D	C	35.9	32.2	532	472	D	C	36.8	33.0	+0.9	+0.8	538	502
		EBR	D	C	35.9	32.2	532	472	D	C	36.8	33.0	+0.9	+0.8	538	502
		WBL	C	F	29.3	104.0	34	125	C	F	27.8	95.9	-1.5	-8.1	32	119
		WBT	B	C	18.9	26.5	172	375	B	C	19.0	26.8	+0.1	+0.3	175	381
		WBR	B	C	18.9	26.5	172	375	B	C	19.0	26.8	+0.1	+0.3	175	381
Wildcat Reserve Pkwy & Thunder Ridge Access (Mountain Maple Ln)	Signal	Overall	C	C	27.9	22.1	-	-	C	C	27.8	21.3	-0.1	-0.8	-	-
		NBL	B	B	11.1	10.3	36	26	B	B	13.3	12.2	+2.2	+1.9	59	48
		NBT	D	C	48.4	33.4	296	198	D	C	48.9	33.5	+0.5	+0.1	287	200
		NBR	A	A	5.1	4.2	11	9	A	A	5.1	5.6	0.0	+1.4	7	18
		SBL	B	A	17.0	8.3	122	38	C	A	25.0	9.5	+8.0	+1.2	191	68
		SBT	B	B	17.8	18.9	135	160	B	B	17.8	18.9	0.0	0.0	135	160
		SBR	B	B	17.8	18.9	135	160	B	B	17.8	18.9	0.0	0.0	135	160
		EBL	C	C	32.0	30.0	57	40	C	C	32.1	30.0	+0.1	0.0	57	40
		EBT	C	A	29.9	9.9	70	5	C	B	30.8	13.2	+0.9	+3.3	77	11
		EBR	C	A	29.9	9.9	70	5	C	B	30.8	13.2	+0.9	+3.3	77	11
		WBL	C	D	34.4	35.6	81	105	D	D	40.4	40.0	+6.0	+4.4	113	132
		WBT	C	C	27.5	27.2	20	14	C	C	27.8	27.6	+0.3	+0.4	28	22
		WBR	A	A	5.8	5.8	5	0	A	A	6.1	6.1	+0.3	0	0	0
Wildcat Reserve Pkwy & Ranch View Access	Unsignalized (TWSC or AWSC)	Overall			-	-	-	-			-	-	-	-	-	-
		NBL	A	A	0.0	0.0	0	0	A	A	0.0	0.0	0.0	0.0	0	0
		NBT	A	A	0.0	0.0	0	0	A	A	0.0	0.0	0.0	0.0	0	0
		NBR	A	A	0.0	0.0	0	0	A	A	0.0	0.0	0.0	0.0	0	0
		SBL	C	B	28.3	13.0	2	2	D	B	46.7	18.4	+18.4	+5.4	2	4
		SBT	-	-	-	-	-	-	-	-	-	-	-	-	-	
		SBR	B	B	11.5	11.9	4	12	B	B	13.3	14.4	+1.8	+2.5	4	16
		EBL	-	-	-	-	-	-	-	-	-	-	-	2	0	
		EBT	A	A	0.0	0.0	0	0	A	A	0.0	0.0	0.0	0.0	0	0
		EBR	A	A	0.0	0.0	0	0	A	A	0.0	0.0	0.0	0.0	2	0
		WBL	A	A	0.0	0.0	0	0	A	A	0.0	0.0	0.0	0.0	2	0
		WBT	A	A	0.0	0.0	0	0	A	A	0.0	0.0	0.0	0.0	0	0
		WBR	A	A	0.0	0.0	0	0	A	A	0.0	0.0	0.0	0.0	2	2

Intersection	Control	Movement	Continued													
			Existing						Total Traffic							
			LOS		Delay (s)		Queue Length (ft)		LOS		Delay (s)		Delay Delta (s)		Queue Length (ft)	
Thunder Ridge Parking Access & Thunder Ridge Access	Unsignalized (TWSC or AWSC)	Overall	-	-	-	-	-	-	-	-	-	-	-	-	-	
		NBL	-	-	-	-	-	-	-	-	-	-	-	-	-	
		NBT	A	A	0.0	0.0	0	0	A	A	0.0	0.0	0.0	0.0	0	0
		NBR	A	A	0.0	0.0	0	0	A	A	0.0	0.0	0.0	0.0	0	0
		SBL	-	-	-	-	-	-	-	-	-	-	-	-	-	
		SBT	A	A	0.0	0.0	0	0	A	A	0.0	0.0	0.0	0.0	0	0
		SBR	-	-	-	-	-	-	-	-	-	-	-	-	-	
		EBL	-	-	-	-	-	-	-	-	-	-	-	-	-	
		EBT	-	-	-	-	-	-	-	-	-	-	-	-	-	
		EBR	-	-	-	-	-	-	-	-	-	-	-	-	-	
		WBL	-	-	-	-	-	-	-	-	-	-	-	-	-	
		WBT	-	-	-	-	-	-	-	-	-	-	-	-	-	
		WBR	A	A	0.0	0.0	0	0	A	A	0.0	0.0	0.0	0.0	0	0

## 4.3 Mitigation

### Signal Warrant Analysis

Five of the seven intersections evaluated in this report are already signalized. The two stop-controlled intersections are Wildcat Reserve Parkway and Ranch View Access as well as the internal Thunder Ridge and Ranch View parking lot intersection. The Ranch View intersection with Wildcat Reserve Parkway provides a free-flowing right-turn into the site and a free-flowing right egress turn lane as well and it is about 500 feet from the signalized intersection of Wildcat Reserve Parkway and Hyacinth Road. Due to the nature and location of both intersections, neither were reviewed for signal warrants.

### Auxiliary Lane Analysis

Right-turn lanes were evaluated for the intersections of Wildcat Reserve Parkway at Mountain Maple Drive and at the right-in/right-out access. Douglas County Roadway Design Standards refer to the Code of Colorado Regulations, State Highway Access Code for the design and installation recommendations. A right-turn lane is recommended when a threshold of 25 right-turning vehicles is exceeded on a Non-Rural Arterial roadway with a posted speed limit greater than 40 miles per hour.

Each Ranch View access has a dedicated right-turn lane into the site and the right-in/right-out access has an add-lane for traffic turning onto Wildcat Reserve Parkway. However, the right-turn lane into the south Ranch View parking lot extends beyond the Hyacinth Road intersection, blocking the bike lane. Extending the right-turn lane through the intersection could be completed; however, this intersection was recently upgraded to a signal, and additional alternatives to allow more vehicles to enter the Mountain Maple Drive parking lot access may be more cost effective and are discussed in the Site Analysis section below.

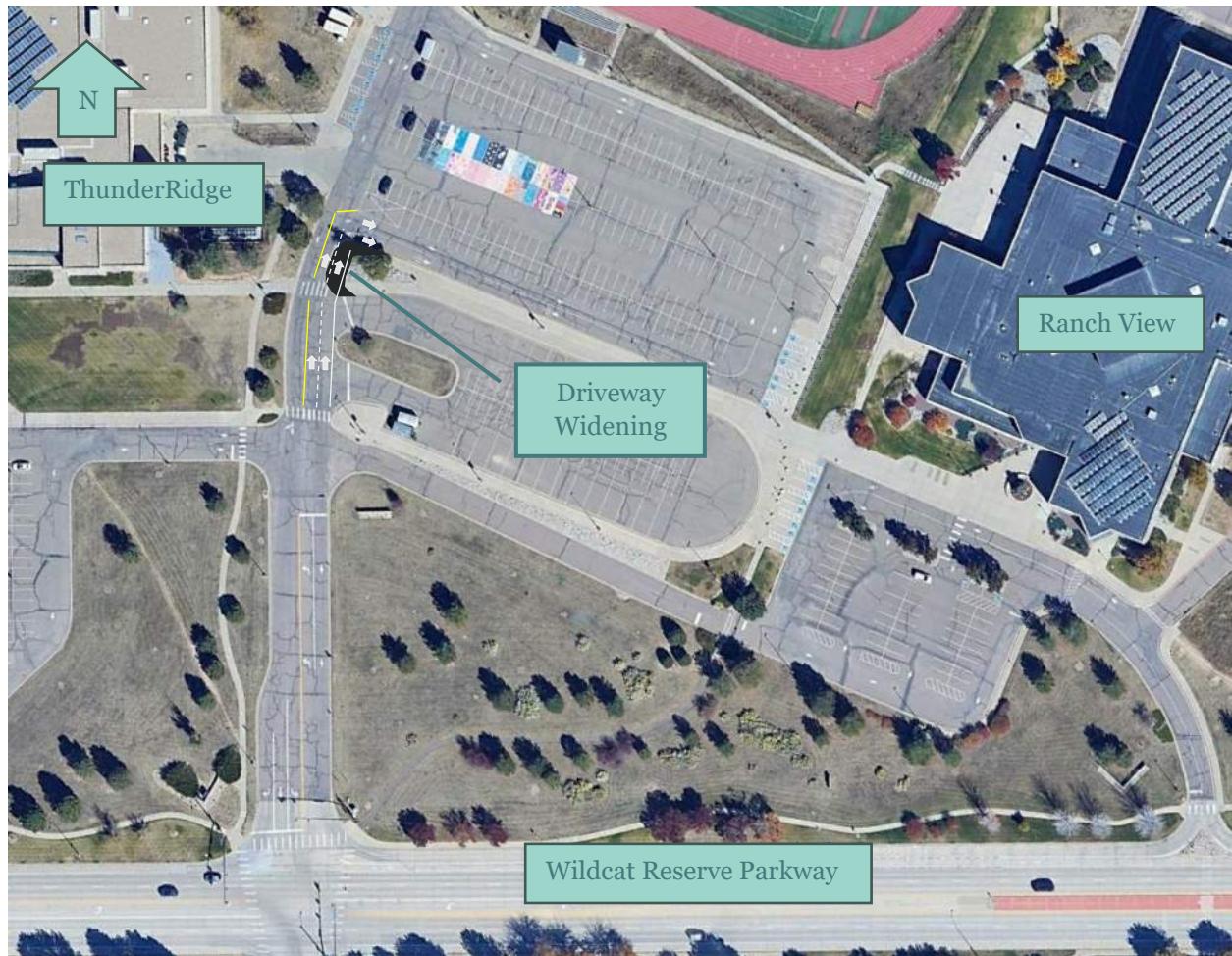
There is a left-turn lane into the school site at the Mountain Maple intersection that has adequate queue length for existing traffic, but may be over capacity if additional students are added, mainly due to the pick-up/drop-off line extending into the intersection. This is further addressed under Site Analysis below.

### Site Analysis

Based on site observations and feedback from the Ranch View and ThunderRidge Administration, the primary challenge is vehicle queues extending to Wildcat Reserve Parkway. Currently, DCSD operates a rolling bus schedule where buses routes are cancelled every fourth week. The queue length varies depending on which bus routes are active. There are two ways to limit the vehicle queue from extending to Wildcat Reserve Parkway.

1. Increase bus service to Ranch View and ThunderRidge.
2. Allow additional vehicles to queue on site.

Increasing bus service is a simple solution; however, this solution is dependent on the cost of the service and the availability of bus drivers, which may not make it practical. Vehicle queueing typically starts about 30 minutes before school releases and quickly backs up beyond the parking lot limits. Prior to the queues extending beyond the parking lot limits; vehicles park in available parking spaces. However, these spaces become unavailable unless the vehicle travels in the wrong lane to access the parking lot. By widening the throat of the parking lot access to provide two lanes (one for queueing and one for passing), the available parking spaces could be used by vehicles picking up students, creating additional on site queue storage. A depiction of the improvement recommended in the parking lot to achieve this is shown in **Figure 13**.



**Figure 13 – Ranch View Parking Lot Mitigation**

## 5. CONCLUSIONS/RECOMMENDATIONS

This Traffic Impact Study addresses existing traffic pattern concerns and potential traffic challenges at Ranch View Middle School, while considering the anticipated increase in traffic due to relocating 6<sup>th</sup> grade students to Ranch View.

Traffic will be increased with the additional enrollment. The addition of 6<sup>th</sup> grade is anticipated to add about 344 morning peak hour trips and 336 afternoon peak hour trips to the school. Although historic enrollment levels suggest Ranch View could accommodate the increased traffic, more vehicles are expected to travel to the school than currently do. To address existing and potential future traffic challenges the following mitigation measures are recommended:

- Analyze the ability to expand bus service to the middle school by reducing the walking radius around the school. Increased bus service was not analyzed as a required mitigation, but could provide efficiency to the pick-up and drop-off by having additional buses and less personal vehicles.
- Widen the parking lot access to provide 2 entrance lanes into the main parking area between the high school and the middle school allowing for one lane to queue and one lane to pass.

## Appendix A    Site Observation Notes

## TRAFFIC OBSERVATION REPORT

Project Name	DCSD Traffic Study	Project No.	1124175
Observer	Nate Hittle		
Location	Ranch View Middle School		
Time	6:45-8:15 AM	AM / PM	
		DATE	November 13, 2024
		M T W Th F S S	

### Queueing Data

**Start Time:** 7:10 AM

**End Time:** 7:30 AM

**Maximum Queueing Length:** 1250 ft

**Total Storage Length Available:** 440 ft

#### Comments:

The drop-off lane is accessed off of westbound Wildcat Reserve Parkway by a single entrance. Vehicles entering the parking lot drop off students in front of the building, then circle around the parking lot and exit through the same access point that is used to enter the lot on westbound Wildcat Reserve Parkway. The queue forms at 7:10 AM and reaches Wildcat Reserve Parkway by 7:11 AM. At its peak, the queue stretches across Hyacinth Rd. Some vehicles drop off students prior to reaching the building, which causes further delays in the queue.

### On-Street Parking Locations and Availability

#### Comments:

On-street parking is not available.

### Crosswalk Locations and Usage

#### Comments:

Two crosswalks are located in the parking lot. One is located at the Entrance from Wildcat Reserve Parkway. Crosswalks in the parking lot were not heavily utilized, mostly due to the low volume of pedestrian traffic coming from that direction. The crosswalk at the lot entrance was used by students walking, or travelling on bike or scooter, to the adjacent high school. Crosswalks at the intersection of Wildcat Reserve Parkway and Hyacinth Rd were heavily utilized.

## Roadway Characteristics

**Speed Limit(s) and Location(s):**

The speed limit on Wildcat Reserve Parkway is 45 mph.

**Signage:**

A two-way stop sign with pedestrian crossing panel was present in the parking lot at a crosswalk. The exit of the lot contained a stop sign, a "Do not block crosswalk" sign, and a Do Not Enter sign facing the street from the exiting lane.

**Bike Lanes:**

There is a bike lane for each direction on Wildcat Reserve Parkway. This bike lane becomes obstructed by queuing cars during drop off times.

**Other Comments:**

## Sight Visibility Challenges

**Comments:**

Low sun in the mornings may provide some visibility challenges in the morning for vehicles entering the parking lot from Wildcat Reserve Parkway. The ability to see pedestrians on the sidewalk through the rear view may be impaired by the low sun.

## Congestion Areas

**Comments:**

Westbound Wildcat Reserve Parkway becomes congested as cars leave the lot. The downstream high school, which has a similar bell schedule, exacerbates this issue.

## General Traffic Observations

**Comments:**

Buses begin arriving at 7:05 AM, which is also when the first students are dropped off by car. One crossing guard is stationed in front of the front doors to the building facilitating the movement of vehicles through the lot. There was a relatively high volume of students riding bikes and electric scooters. Some students were observed cutting vehicles off at the crosswalk without slowing down. Several vehicles were observed making U-turns at Hyacinth Rd into the queue.

## TRAFFIC OBSERVATION REPORT

Project Name	DCSD Traffic Study	Project No.	1124175
Observer	Nate Hittle		
Location	Ranch View Middle School		
Time	1:45 - 3:15 PM	AM / PM	
		DATE	November 13, 2024
		M T W Th F S S	

### Queueing Data

**Start Time:** 1:50 PM

**End Time:** 2:58 PM

**Maximum Queueing Length:** 1750 ft

**Total Storage Length Available:** 440 ft

#### Comments:

The drop-off lane is accessed off of westbound Wildcat Reserve Parkway by a single entrance. Vehicles entering the parking lot pick up students in front of the building, then circle around the parking lot and exit through the same access point that is used to enter the lot on westbound Wildcat Reserve Parkway. The queue forms at 1:50 PM and reaches Wildcat Reserve Parkway by 2:20 PM. At its peak, the queue stretches across Hyacinth Rd, with a total of 23 cars queued up on the East side of Hyacinth Rd. At the time of observations, drivers left breaks in the queue for the crosswalk at the entrance to the lot and at the fire access lane on the side of the building.

### On-Street Parking Locations and Availability

#### Comments:

On-street parking is not available.

### Crosswalk Locations and Usage

#### Comments:

Two crosswalks are located in the parking lot. One is located at the Entrance from Wildcat Reserve Parkway. Crosswalks in the parking lot were not heavily utilized, mostly due to the low volume of pedestrian traffic coming from that direction. The crosswalk at the lot entrance was used by students walking, or travelling on bike or scooter, from the adjacent high school. Crosswalks at the intersection of Wildcat Reserve Parkway and Hyacinth Rd were heavily utilized.

## Roadway Characteristics

**Speed Limit(s) and Location(s):**

The speed limit on Wildcat Reserve Parkway is 45 mph.

**Signage:**

A two-way stop sign with pedestrian crossing panel was present in the parking lot at a crosswalk. The exit of the lot contained a stop sign, a "Do not block crosswalk" sign, and a Do Not Enter sign facing the street from the exiting lane.

**Bike Lanes:**

There is a bike lane for each direction on Wildcat Reserve Parkway. This bike lane becomes obstructed by queuing cars during pick up times.

**Other Comments:**

## Sight Visibility Challenges

**Comments:**

## Congestion Areas

**Comments:**

Westbound Wildcat Reserve Parkway becomes congested as cars leave the lot. The downstream high school, which has a similar bell schedule, exacerbates this issue.

## General Traffic Observations

**Comments:**

The queue reached Hyacinth Rd by 2:28 PM. After this, the queue did not lengthen for a couple minutes, though it eventually accrued 23 cars on the east side of Hyacinth Rd. The right turn movement became blocked by these cars. Vehicles turning right would cut off the queue. One vehicle was witnessed making a U-turn at Hyacinth Rd into the queue, cutting vehicles queued up on the other side of the intersection. After the bell, high volumes of crosswalk usage caused significant delays for vehicles turning at this intersection.

## TRAFFIC OBSERVATION REPORT

Project Name	DCSD Traffic Study	Project No.	1124175
Observer	Nick Westphal		
Location	Ranch View Middle School - Mountain Maple		
Time	6:45-8:15 AM	AM / PM	
		DATE	13-Nov-24
		M T W Th F S S	

### Queueing Data

**Start Time:** 7:05 AM

**End Time:** 7:30 AM

**Maximum Queueing Length:** Left-turn lane is full at 7:05 plus a couple more cars. Right-turn lane backed up to Ranch View exit with weaving traffic. Exit stopped at 7:20 causing entrance to back up more.

**Total Storage Length Available:** 440 ft

### Comments:

High School and Middle School drop off occurs in the main parking lot between the schools. High School can drop off in other locations, but it is not directed. Middle School students can drop off in front of Middle School, but it is a right turn only at the entrance and exit. Cones are placed at 7:00 blocking off visitor parking and the entrance to the track parking lot due to the queue extending past the entrance.

### On-Street Parking Locations and Availability

#### Comments:

On-street parking is not available.

### Crosswalk Locations and Usage

#### Comments:

Primary crosswalks are located at Mountain Maple across Wildcat. The crosswalk provides a short walk length when signals are all red, prior to green on Mountain Maple. Pedestrians limit the exit capacity because left and right turners need to wait for pedestrians to clear.

## Roadway Characteristics

**Speed Limit(s) and Location(s):**

The speed limit on Wildcat Reserve Parkway is 45 mph.

**Signage:**

Signing in the school note the bus drop off area and passenger pickup area.

**Bike Lanes:**

There is a bike lane for each direction on Wildcat Reserve Parkway. This bike lane becomes obstructed by queuing cars during drop off times.

**Other Comments:**

NB Wildcat drivers are making U-Turns at Mountain Maple after leaving the Ranch View right-out.

## Sight Visibility Challenges

**Comments:**

The traffic light is signalized, so sight visibility is not as big of a concern. Traffic turning in and not being able to completely enter the drive caused some visibility issues.

## Congestion Areas

**Comments:**

The driveway to the school is congested entering and exiting.

## General Traffic Observations

**Comments:**

Buses start coming in at 7:05.

Two parking attendants are present in the AM, one at the bus loop and one at the drop off crosswalk.

The crosswalk from the vehicles and bus drop off sidewalk crosses the entrance/exit drive pausing traffic.

It is noted that a signal was installed at Hyacinth and a mid-block crosswalk was removed to Ranch View.

## TRAFFIC OBSERVATION REPORT

Project Name	DCSD Traffic Study	Project No.	1124175
Observer	Nick Westphal		
Location	Ranch View Middle School - Mountain Maple		
Time	1:45 - 3:15 PM	AM / PM	
		DATE	13-Nov-24
		M T W Th F S S	

### Queueing Data

**Start Time:** 2:08 PM

**End Time:** 3:00 PM

**Maximum Queueing Length:** Queuing extended to the roadway and about 8 cars in the right-turn lane.

### Total Storage Length Available:

#### Comments:

The queue in the track parking lot started at 2:08 and cars blocked the entrance to the parking lot at 2:34. Some vehicles park in open parking stalls to wait for their student. Once the loop was blocked, some cars started entering the parking lot through the exit lane. The queue extends across the bus loop and parking attendants need to clear it to allow buses in.

### On-Street Parking Locations and Availability

#### Comments:

On-street parking is not available.

### Crosswalk Locations and Usage

#### Comments:

Primary crosswalks are located at Mountain Maple across Wildcat. The crosswalk provides a short walk length when signals are all red, prior to green on Mountain Maple. Pedestrians limit the exit capacity because left and right turners need to wait for pedestrians to clear. Walkers start using the signal at 2:50. There are more walkers in the afternoon.

## Roadway Characteristics

**Speed Limit(s) and Location(s):**

The speed limit on Wildcat Reserve Parkway is 45 mph.

**Signage:**

Signing in the school note the bus drop off area and passenger pickup area.

**Bike Lanes:**

There is a bike lane for each direction on Wildcat Reserve Parkway. This bike lane becomes obstructed by queuing cars during pick up times.

**Other Comments:**

NB Wildcat drivers are making U-Turns at Mountain Maple after leaving the Ranch View right-out.

## Sight Visibility Challenges

**Comments:**

The traffic light is signalized, so sight visibility is not as big of a concern. Traffic turning in and not being able to completely enter the drive caused some visibility issues.

## Congestion Areas

**Comments:**

Wildcat is not as congested in the afternoon. There are not any backups in the left-turn lane and the right-turn lane backed up with 8 cars for one cycle.

Vehicles did park along Mountain Maple, across from the schools, to pick up their students.

## General Traffic Observations

**Comments:**

The exit gets blocked by pedestrians crossing Mountain Maple.

The buses leave at 2:57 and are directed out by parking attendants.

Only one attendant was present in the PM at the main crosswalk.

All cones are picked up at 3:00.

## Appendix B    Traffic Volume Counts

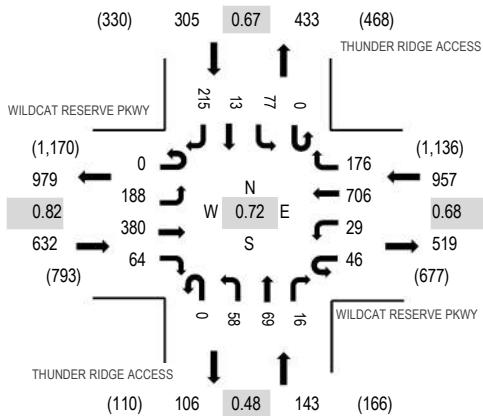
**Location:** 54 THUNDER RIDGE ACCESS & WILDCAT RESERVE PKWY AM

**Date:** Wednesday, November 13, 2024

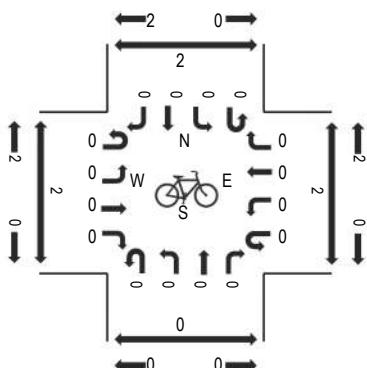
**Peak Hour:** 07:00 AM - 08:00 AM

**Peak 15-Minutes:** 07:15 AM - 07:30 AM

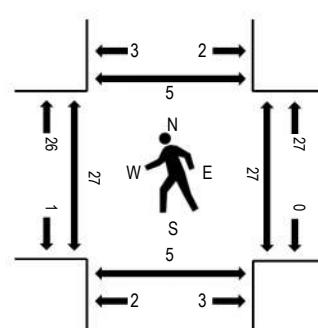
### Peak Hour - Motorized Vehicles



### Peak Hour - Bicycles



### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

### Traffic Counts - Motorized Vehicles

Interval Start Time	WILDCAT RESERVE PKWY												Rolling Hour	Pedestrian Crossings								
	Eastbound				Westbound				Northbound					West	East	South	North					
U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	1,959	2	2	0	2	
6:45 AM	0	14	54	2	1	0	83	11	0	6	2	1	0	9	1	6	190	1,959	2	2	0	2
7:00 AM	0	90	86	16	6	9	157	47	0	16	12	3	0	10	2	72	526	2,037	1	11	1	1
7:15 AM	0	52	85	34	27	12	238	75	0	22	48	4	0	25	9	81	712	1,709	16	16	3	3
7:30 AM	0	39	112	8	13	7	183	45	0	12	9	8	0	38	2	55	531	10	0	1	1	
7:45 AM	0	7	97	6	0	1	128	9	0	8	0	1	0	4	0	7	268	0	0	0	0	
8:00 AM	0	7	83	1	1	0	82	1	0	10	0	4	0	5	0	4	198	0	0	0	0	
Count Total	0	209	517	67	48	29	871	188	0	74	71	21	0	91	14	225	2,425	29	29	5	7	
Peak Hour	0	188	380	64	46	29	706	176	0	58	69	16	0	77	13	215	2,037	27	27	5	5	

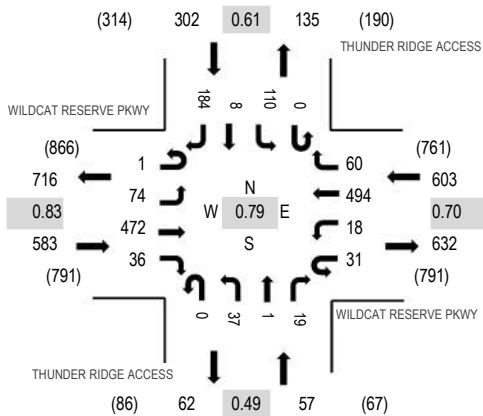
**Location:** 54 THUNDER RIDGE ACCESS & WILDCAT RESERVE PKWY PM

**Date:** Wednesday, November 13, 2024

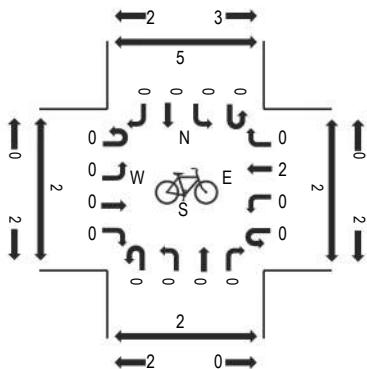
**Peak Hour:** 02:30 PM - 03:30 PM

**Peak 15-Minutes:** 03:00 PM - 03:15 PM

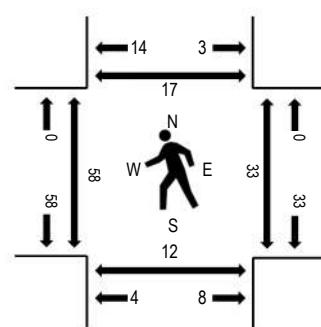
### Peak Hour - Motorized Vehicles



### Peak Hour - Bicycles



### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

### Traffic Counts - Motorized Vehicles

Interval Start Time	WILDCAT RESERVE PKWY				WILDCAT RESERVE PKWY				THUNDER RIDGE ACCESS				THUNDER RIDGE ACCESS				Rolling Hour	Pedestrian Crossings				
	Eastbound		Westbound		Northbound		Southbound		Total		West	East	South	North				West	East	South	North	
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total									
2:00 PM	0	6	75	13	1	0	63	2	0	4	0	1	0	2	0	4	171	1,133	0	0	0	0
2:15 PM	0	32	75	7	1	4	72	15	0	4	0	1	0	3	0	3	217	1,450	0	0	0	1
2:30 PM	0	34	86	14	0	1	81	17	0	3	0	1	0	7	1	18	263	1,545	0	0	0	0
2:45 PM	1	10	120	8	20	13	163	20	0	16	1	12	0	28	2	68	482	48	32	12	15	
3:00 PM	0	22	148	6	7	2	149	16	0	10	0	4	0	58	4	62	488	9	1	0	2	
3:15 PM	0	8	118	8	4	2	101	7	0	8	0	2	0	17	1	36	312	1	0	0	0	
Count Total	1	112	622	56	33	22	629	77	0	45	1	21	0	115	8	191	1,933	58	33	12	18	
Peak Hour	1	74	472	36	31	18	494	60	0	37	1	19	0	110	8	184	1,545	58	33	12	17	

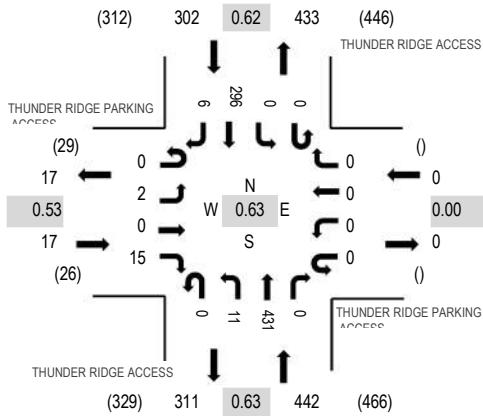
**Location:** 55 THUNDER RIDGE ACCESS & THUNDER RIDGE PARKING ACCESS AM

**Date:** Wednesday, November 13, 2024

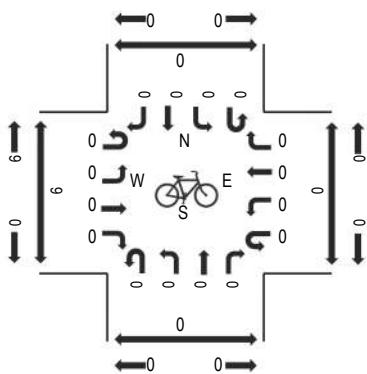
**Peak Hour:** 06:45 AM - 07:45 AM

**Peak 15-Minutes:** 07:15 AM - 07:30 AM

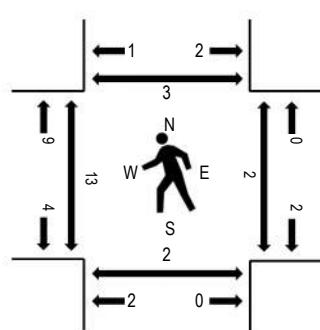
### Peak Hour - Motorized Vehicles



### Peak Hour - Bicycles



### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

### Traffic Counts - Motorized Vehicles

Interval Start Time	THUNDER RIDGE PARKING ACCESS				THUNDER RIDGE PARKING ACCESS				THUNDER RIDGE ACCESS				THUNDER RIDGE ACCESS				Rolling Hour	Pedestrian Crossings				
	Eastbound	Westbound	Northbound	Southbound	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	West	East	South	North	
6:45 AM	0	2	0	6	0	0	0	0	0	9	16	0	0	0	10	0	43	761	1	1	0	1
7:00 AM	0	0	0	1	0	0	0	0	0	0	143	0	0	0	90	0	234	746	2	0	1	2
7:15 AM	0	0	0	4	0	0	0	0	0	0	175	0	0	0	117	4	300	527	7	0	0	0
7:30 AM	0	0	0	4	0	0	0	0	0	2	97	0	0	0	79	2	184	3	1	1	1	0
7:45 AM	0	0	0	4	0	0	0	0	0	9	8	0	0	0	7	0	28	0	0	0	0	0
8:00 AM	0	1	0	4	0	0	0	0	0	3	4	0	0	0	3	0	15	0	0	0	0	0
Count Total	0	3	0	23	0	0	0	0	0	23	443	0	0	0	306	6	804	13	2	2	3	
Peak Hour	0	2	0	15	0	0	0	0	0	11	431	0	0	0	296	6	761	13	2	2	3	

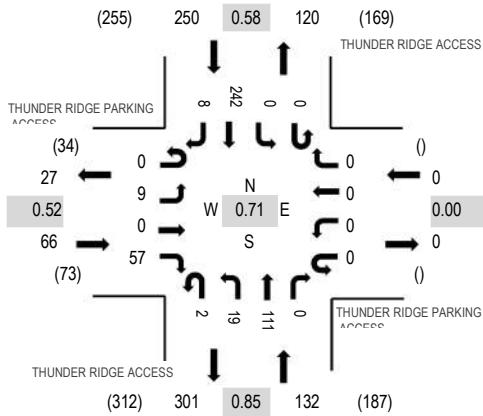
**Location:** 55 THUNDER RIDGE ACCESS & THUNDER RIDGE PARKING ACCESS PM

**Date:** Wednesday, November 13, 2024

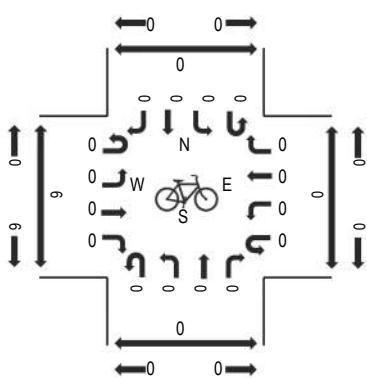
**Peak Hour:** 02:30 PM - 03:30 PM

**Peak 15-Minutes:** 02:45 PM - 03:00 PM

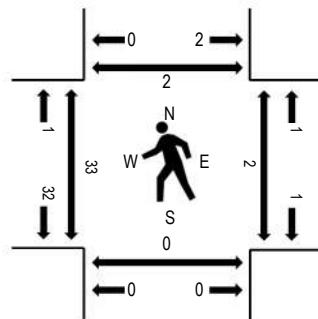
### Peak Hour - Motorized Vehicles



### Peak Hour - Bicycles



### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

### Traffic Counts - Motorized Vehicles

Interval Start Time	THUNDER RIDGE PARKING ACCESS				THUNDER RIDGE PARKING ACCESS				THUNDER RIDGE ACCESS				THUNDER RIDGE ACCESS				Rolling Hour	Pedestrian Crossings				
	Eastbound	Westbound	Northbound	Southbound	Eastbound	Westbound	Northbound	Southbound	Eastbound	Westbound	Northbound	Southbound	Eastbound	Westbound	Northbound	Southbound		West	East	South	North	
2:00 PM	0	0	0	4	0	0	0	0	0	0	1	7	0	0	0	2	0	14	289	0	0	0
2:15 PM	0	0	0	3	0	0	0	0	0	0	5	42	0	0	0	2	1	53	427	0	0	0
2:30 PM	0	1	0	10	0	0	0	0	1	3	29	0	0	0	0	17	3	64	448	3	0	0
2:45 PM	0	0	0	2	0	0	0	0	1	0	47	0	0	0	0	106	2	158	27	0	0	0
3:00 PM	0	4	0	28	0	0	0	0	0	13	23	0	0	0	0	83	1	152	3	2	0	1
3:15 PM	0	4	0	17	0	0	0	0	0	3	12	0	0	0	0	36	2	74	0	0	0	1
Count Total	0	9	0	64	0	0	0	0	2	25	160	0	0	0	0	246	9	515	33	2	0	2
Peak Hour	0	9	0	57	0	0	0	0	2	19	111	0	0	0	0	242	8	448	33	2	0	2

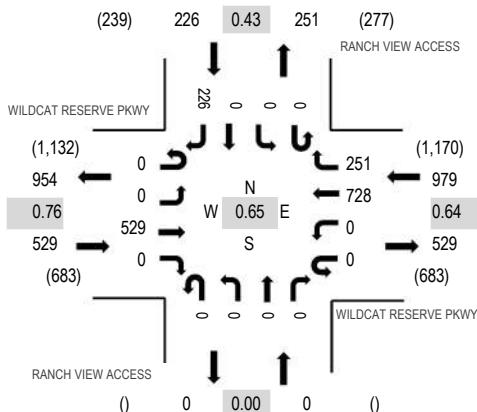
**Location:** 56 RANCH VIEW ACCESS & WILDCAT RESERVE PKWY AM

**Date:** Wednesday, November 13, 2024

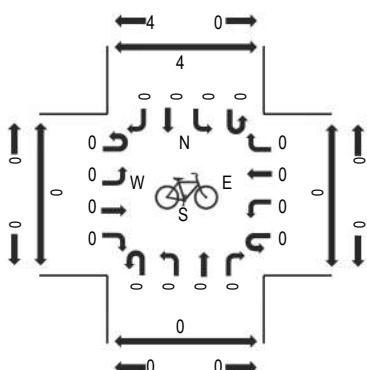
**Peak Hour:** 07:00 AM - 08:00 AM

**Peak 15-Minutes:** 07:15 AM - 07:30 AM

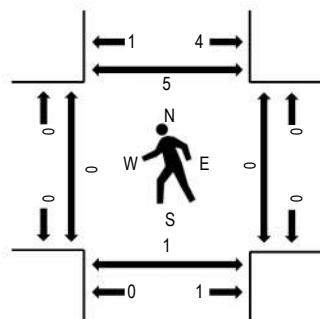
### Peak Hour - Motorized Vehicles



### Peak Hour - Bicycles



### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

### Traffic Counts - Motorized Vehicles

Interval Start Time	WILDCAT RESERVE PKWY				RANCH VIEW ACCESS				RANCH VIEW ACCESS				Rolling Hour	Pedestrian Crossings			
	Eastbound		Westbound		Northbound		Southbound		U-Turn	Left	Thru	Right	Total	West	East	South	North
6:45 AM	0	0	64	0	0	0	93	24	0	0	0	0	0	0	0	0	2
7:00 AM	0	0	107	0	0	0	172	97	0	0	0	0	0	59	435	1,734	0
7:15 AM	0	0	146	0	0	0	248	136	0	0	0	0	0	132	662	1,469	0
7:30 AM	0	0	174	0	0	0	183	12	0	0	0	0	0	30	399	0	1
7:45 AM	0	0	102	0	0	0	125	6	0	0	0	0	0	5	238	0	0
8:00 AM	0	0	90	0	0	0	72	2	0	0	0	0	0	6	170	0	0
Count Total	0	0	683	0	0	0	893	277	0	0	0	0	0	239	2,092	0	1
Peak Hour	0	0	529	0	0	0	728	251	0	0	0	0	0	226	1,734	0	5

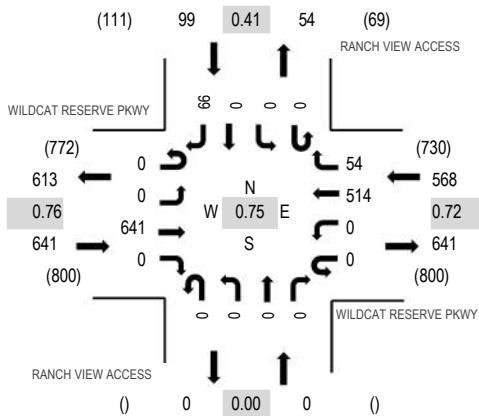
**Location:** 56 RANCH VIEW ACCESS & WILDCAT RESERVE PKWY PM

**Date:** Wednesday, November 13, 2024

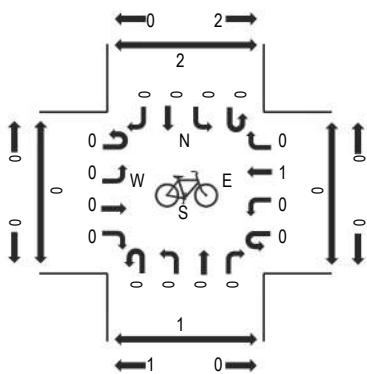
**Peak Hour:** 02:30 PM - 03:30 PM

**Peak 15-Minutes:** 02:45 PM - 03:00 PM

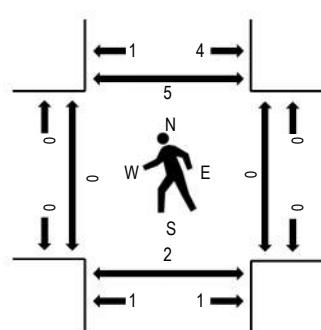
### Peak Hour - Motorized Vehicles



### Peak Hour - Bicycles



### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

### Traffic Counts - Motorized Vehicles

Interval Start Time	WILDCAT RESERVE PKWY				WILDCAT RESERVE PKWY				RANCH VIEW ACCESS				RANCH VIEW ACCESS				Rolling Hour	Pedestrian Crossings				
	Eastbound		Westbound		Northbound		Southbound		U-Turn		Left		Thru		Right			Total	West	East	South	North
2:00 PM	0	0	79	0	0	0	63	6	0	0	0	0	0	0	0	0	151	976	0	0	0	0
2:15 PM	0	0	80	0	0	0	84	9	0	0	0	0	0	0	0	0	182	1,221	0	0	0	1
2:30 PM	0	0	95	0	0	0	106	2	0	0	0	0	0	0	0	0	205	1,308	0	0	0	0
2:45 PM	0	0	179	0	0	0	156	42	0	0	0	0	0	0	0	0	61	438	0	0	2	2
3:00 PM	0	0	211	0	0	0	154	8	0	0	0	0	0	0	0	0	23	396	0	0	0	3
3:15 PM	0	0	156	0	0	0	98	2	0	0	0	0	0	0	0	0	13	269	0	0	0	0
Count Total	0	0	800	0	0	0	661	69	0	0	0	0	0	0	0	0	111	1,641	0	0	2	6
Peak Hour	0	0	641	0	0	0	514	54	0	0	0	0	0	0	0	0	99	1,308	0	0	2	5

## Appendix C Existing Traffic Signal Timing Plans

Station : 33 - HR Pkwy &amp; Deer Creek/Westridge Village Pkwy ( Standard File )

## Phase [1.1.1]

	$\phi 1$ (WL)	$\phi 2$ (ET)	$\phi 3$	$\phi 4$ (ST)	$\phi 5$ (EL)	$\phi 6$ (WT)	$\phi 7$	$\phi 8$ (NT)	$\phi 9$	$\phi 10$	$\phi 11$	$\phi 12$	$\phi 13$	$\phi 14$	$\phi 15$	$\phi 16$
Walk	0	5	0	5	0	5	0	5	0	0	0	0	0	0	0	0
Ped Clearance	0	13	0	23	0	11	0	22	0	0	0	0	0	0	0	0
Min Green	5	20	0	5	5	20	0	5	0	0	0	0	0	0	0	0
Gap Ext	1.5	3	0	2	1.5	3	0	2	0	0	0	0	0	0	0	0
Max1	15	40	0	25	15	40	0	25	0	0	0	0	0	0	0	0
Max2	8	30	0	20	8	30	0	20	0	0	0	0	0	0	0	0
Yellow Clr	3	4.5	0	3	3	4.5	0	3	3	3	3	3	3	3	3	3
Red Clr	1	2	0	2	1	2	0	2	2	2	2	2	2	2	2	2
Red Revert	5	5	0	5	5	5	0	5	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																

## Phase Option [1.1.2]

	$\phi 1$ (WL)	$\phi 2$ (ET)	$\phi 3$	$\phi 4$ (ST)	$\phi 5$ (EL)	$\phi 6$ (WT)	$\phi 7$	$\phi 8$ (NT)	$\phi 9$	$\phi 10$	$\phi 11$	$\phi 12$	$\phi 13$	$\phi 14$	$\phi 15$	$\phi 16$
Enable	ON	ON		ON	ON	ON		ON								
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON		ON		ON		ON								
Sim Gap Enable	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON														
Cond Service																
Add Init Calc																

## Phase Option+ [1.1.3]/[1.1.5]

	$\phi 1$	$\phi 2$	$\phi 3$	$\phi 4$	$\phi 5$	$\phi 6$	$\phi 7$	$\phi 8$	$\phi 9$	$\phi 10$	$\phi 11$	$\phi 12$	$\phi 13$	$\phi 14$	$\phi 15$	$\phi 16$
Reserve																
Ped Clr Thru Yellow																
Skip Red-NoCall																
Red Rest																
Max 2																
Max Inhibit																
Ped Delay																
Red Rest On Gap																
Conflicting P																
Green Ped Delay Time																
Omit Yel																
Ped Out																
Start Yel																
Inhibit P1		ON														
Inhibit P2																
Inhibit P3																
Inhibit P4																
Inhibit P5							ON									
Inhibit P6																
Inhibit P7																
Inhibit P8																
Call Phs1																
Call Phs2																
Redirect P Calls From 1																
Redirect P Calls To 1																
Redirect P Calls From 2																
Redirect P Calls To 2																
Redirect P Calls From 3																
Redirect P Calls To 3																
Redirect P Calls From 4																
Redirect P Calls To 4																

Prepared By / Date

Reviewed By / Date



## Douglas County

## Timing Sheet

11/27/2024 10:52:49 AM

**Station : 33 - HR Pkwy & Deer Creek/Westridge Village Pkwy ( Standard File )**

## Ring Sequence [1.2.4]

## Unit Parameters [1.2.1]

StartUp Flash	Auto Ped Clear	Red Revert	Local Flash Start	Allow < 3 sec Yel	Allow Skip Yel	MCE Timeout	Enable Run	Start Red Time	Phase Mode	Startup Calls	Diamond Mode	Stop Time Over Preempt	Free Ring Sequence	Clearance Decide	Min Ped Clear Time	Ring Algo	
OFF	5	RST	OFF	OFF	ON	6	STD8	OFF	4PH	OFF	1	OFF	OFF	OFF	OFF	OFF	

## Alarms, Parameters [1.4.1]

## Auto Flash Parameter

Yellow	Red	Mode	Source
--------	-----	------	--------

Detector, Vehicle Parameters 1-16 [5.1]

Detector #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Yellow Lock																
Red Lock																
Extend	ON	ON	ON	ON	ON		ON	ON	ON	ON	ON		ON	ON	ON	
Added Initial																
Call	ON	ON	ON	ON		ON	ON	ON	ON			ON	ON	ON	ON	
Call Phase	1	2	2	2	2	2	3	4	4	4	4	4	1	3	5	
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Delay Time	0	0	0	0	0	0	0	7.5	0	3	0	0	0	0	0	

Detector, Vehicle Parameters 17-32 [5.1]

Detector #	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Yellow Lock																
Red Lock																
Extend	ON	ON	ON		ON	ON	ON	ON	ON		ON	ON				
Added Initial																
Call	ON	ON		ON	ON	ON	ON	ON		ON	ON	ON				
Call Phase	6	6	6	6	7	8	8	8	8	8	5	7	0	0	0	
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Delay Time	0	0	0	0	0	12	0	3	0	0	0	0	0	0	0	

## Detector, Ped Detectors 1-16 [5.4]

## Douglas County

## Timing Sheet

11/27/2024 10:52:49 AM

**Station : 33 - HR Pkwy & Deer Creek/Westridge Village Pkwy ( Standard File )**

## Channels/SDLC, Assign to Phases [1.8.1]

Channel/SDLC +, Assign to Phases [1.8.4]

## Overlap General Parameters [1.5.1]

Conflict Lock	Lock Inhibit	Program Card	Use Parent	Canadian Fast Flash
OFF	OFF	ON	ALWAYS	

### Overlap Program Parameters [1.5.2.1]

Overlap	Included Phases				Modifier Phases				Type	Green	Yellow	Red
Overlap 1									-GRYEL	3.5	1.5	
Overlap 2									-GRYEL	3.5	1.5	
Overlap 3									NORMAL	3.5	1.5	
Overlap 4									NORMAL	3.5	1.5	
Overlap 5									NORMAL	3.5	1.5	
Overlap 6									NORMAL	3.5	1.5	
Overlap 7									NORMAL	3.5	1.5	
Overlap 8									NORMAL	3.5	1.5	

#### Overlap Conflict Parameters+ [1.5.2.2]

Overlap	Conflicting Phases		Conflicting Overlaps		Conflicting Peds	
Overlap 1						
Overlap 2						
Overlap 3						
Overlap 4						
Overlap 5						
Overlap 6						
Overlap 7						
Overlap 8						

### Overlap Program Parameters+ [1.5.2.3]



**Station : 33 - HR Pkwy & Deer Creek/Westridge Village Pkwy ( Standard File )****Preemption Times[3.1]/Phases[3.2]/Options[3.3]**

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash	ON	ON				
Override Higher Preempt	ON	ON				
Flash in Dwell						
Link to Preempt	0	0	0	0	0	0
Delay	0	0	0	0	0	0
Min Duration	0	0	5	5	5	5
Min Green	0	0	5	5	5	5
Min Walk	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0
Track Green	0	0	0	0	0	0
Min Dwell	0	0	0	0	0	0
Max Presence	0	0	120	120	120	120
Track Veh 1	0	0	0	0	0	0
Track Veh 2	0	0	0	0	0	0
Track Veh 3	0	0	0	0	0	0
Track Veh 4	0	0	0	0	0	0
Dwell Cyc Veh 1	0	0	2	4	1	8
Dwell Cyc Veh 2	0	0	5	0	6	0
Dwell Cyc Veh 3	0	0	0	0	0	0
Dwell Cyc Veh 4	0	0	0	0	0	0
Dwell Cyc Veh 5	0	0	0	0	0	0
Dwell Cyc Veh 6	0	0	0	0	0	0
Dwell Cyc Veh 7	0	0	0	0	0	0
Dwell Cyc Veh 8	0	0	0	0	0	0
Dwell Cyc Veh 9	0	0	0	0	0	0
Dwell Cyc Veh 10	0	0	0	0	0	0
Dwell Cyc Veh 11	0	0	0	0	0	0
Dwell Cyc Veh 12	0	0	0	0	0	0
Dwell Cyc Ped1	0	0	0	0	0	0
Dwell Cyc Ped2	0	0	0	0	0	0
Dwell Cyc Ped3	0	0	0	0	0	0
Dwell Cyc Ped4	0	0	0	0	0	0
Dwell Cyc Ped5	0	0	0	0	0	0
Dwell Cyc Ped6	0	0	0	0	0	0
Dwell vPed7	0	0	0	0	0	0
Dwell Cyc Ped8	0	0	0	0	0	0
Exit 1	0	0	4	0	4	0
Exit 2	0	0	8	0	8	0
Exit 3	0	0	0	0	0	0
Exit 4	0	0	0	0	0	0

**Preemption Times+[3.4]/Overlaps+[3.5]/Options+[3.6]**

Preempt	1	2	3	4	5	6
Enable			ON	ON	ON	ON
Type	RAIL	RAIL	EMERG	EMERG	EMERG	EMERG
Skip Track						
Volt Mon Flash						
Coord in Preempt						
Return Max/Min	MAX	MAX	MAX	MAX	MAX	MAX
Extend Dwell	0	0	0	0	0	0
Pattern	0	0	0	0	0	0
Output Mode	TS2	TS2	TS2	TS2	TS2	TS2
Track Over 1	0	0	0	0	0	0
Track Over 2	0	0	0	0	0	0
Track Over 3	0	0	0	0	0	0
Track Over 4	0	0	0	0	0	0
Track Over 5	0	0	0	0	0	0
Track Over 6	0	0	0	0	0	0
Track Over 7	0	0	0	0	0	0
Track Over 8	0	0	0	0	0	0
Track Over 9	0	0	0	0	0	0
Track Over 10	0	0	0	0	0	0
Track Over 11	0	0	0	0	0	0
Track Over 12	0	0	0	0	0	0
DwellCyc Over 1	0	0	0	0	0	0
DwellCyc Over 2	0	0	0	0	0	0
DwellCyc Over 3	0	0	0	0	0	0
DwellCyc Over 4	0	0	0	0	0	0
DwellCyc Over 5	0	0	0	0	0	0
DwellCyc Over 6	0	0	0	0	0	0
DwellCyc Over 7	0	0	0	0	0	0
DwellCyc Over 8	0	0	0	0	0	0
DwellCyc Over 9	0	0	0	0	0	0
DwellCyc Over 10	0	0	0	0	0	0
DwellCyc Over 11	0	0	0	0	0	0
DwellCyc Over 12	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0
Yellow	0	0	0	0	0	0
Red	0	0	0	0	0	0
Return Max	0	0	0	0	0	0

**Preemption Adv Times[3.8]/Init Dwell [3.9]**

Preempt	1	2	3	4	5	6
All Red B4 Preempt						
Reset Ext Dwell						
Reservice Preempt						
End Dwell						
DsblDwellCalls						
Enter Yellow Change	25.5	25.5	25.5	25.5	25.5	25.5
Enter Red Clear	25.5	25.5	25.5	25.5	25.5	25.5
Track Yellow Change	25.5	25.5	25.5	25.5	25.5	25.5
Track Red Clear	25.5	25.5	25.5	25.5	25.5	25.5
Dynamic Exit Threshold	0	0	0	0	0	0
Initial Dwell Phase 1	0	0	0	0	0	0
Initial Dwell Phase 2	0	0	0	0	0	0
Initial Dwell Phase 3	0	0	0	0	0	0
Initial Dwell Phase 4	0	0	0	0	0	0
Ped 1	0	0	0	0	0	0
Ped 2	0	0	0	0	0	0
Ped 3	0	0	0	0	0	0
Ped 4	0	0	0	0	0	0
Initial Dwell Overlap 1	0	0	0	0	0	0
Initial Dwell Overlap 2	0	0	0	0	0	0
Initial Dwell Overlap 3	0	0	0	0	0	0
Initial Dwell Overlap 4	0	0	0	0	0	0
Initial Dwell Overlap 5	0	0	0	0	0	0
Initial Dwell Overlap 6	0	0	0	0	0	0
Initial Dwell Overlap 7	0	0	0	0	0	0
Initial Dwell Overlap 8	0	0	0	0	0	0
Initial Dwell Overlap 9	0	0	0	0	0	0
Initial Dwell Overlap 10	0	0	0	0	0	0
Initial Dwell Overlap 11	0	0	0	0	0	0
Initial Dwell Overlap 12	0	0	0	0	0	0
Initial Dwell Overlap 13	0	0	0	0	0	0
Initial Dwell Overlap 14	0	0	0	0	0	0
Initial Dwell Overlap 15	0	0	0	0	0	0

Initial Dwell Overlap 16 0 0 0 0 0 0 0 0

Coordination, Modes, + [2.1]

## Modes

<b>Operational</b>	<b>Correct</b>	<b>Maximum</b>	<b>Force-Off</b>
	SHRT/LNG	MAX INH	FLOAT

Modes+

Mode	Leave Before	Leave After	Recycle	Stop In Walk	External	Auto Reset	Latch Sec Foff	Coord Easy Float	Yield Value	Coord NTCP Yield Sign	Closed Loop Active
RESERVED	TIMED	TIMED	NO RECYLE	ON	OFF	ON	OFF	OFF	0	+	ON OFF

## Coordination, Pattern 1-16 [2.4]

## Coordination, Pattern 17-32 [2.4]

## Coordination, Pattern+ 1-8 [2.5]

## Douglas County

## Timing Sheet

11/27/2024 10:52:49 AM

**Station : 33 - HR Pkwy & Deer Creek/Westridge Village Pkwy ( Standard File )**

Coordination, Pattern+ 9-16 [2.5]

Coordination, Pattern+ 17 - 24 [2.5]

**Station :** 33 - HR Pkwy & Deer Creek/Westridge Village Pkwy ( Standard File )

## Coordination, Splits [2.7.1]

## Douglas County

## Timing Sheet

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**Station : 33 - HR Pkwy & Deer Creek/Westridge Village Pkwy ( Standard File )**

Split Table 22	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON															
Group	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	

## Douglas County

## Timing Sheet

11/27/2024 10:52:49 AM

**Station :** 33 - HR Pkwy & Deer Creek/Westridge Village Pkwy ( Standard File )

## Douglas County

## Timing Sheet

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**Station : 33 - HR Pkwy & Deer Creek/Westridge Village Pkwy ( Standard File )**

## TB Coor, Advanced Scheduler [4.3]

TB Coor, Day Plan [4.4]

## Douglas County

## Timing Sheet

11/27/2024 10:52:49 AM

**Station : 33 - HR Pkwy & Deer Creek/Westridge Village Pkwy ( Standard File )**

Station : 33 - HR Pkwy &amp; Deer Creek/Westridge Village Pkwy ( Standard File )

## TB Coor, Action Table [4.5]

Action	Pattern	Aux 1	Aux 2	Aux 3	Special 1	Special 2	Special 3	Special 4	Special 5	Special 6	Special 7	Special 8
1	1				0	0						
2	2				0	0						
3	3				0	0						
4	4				0	0						
5	5				0	0						
6	6				0	0						
7	7				0	0						
8	8				0	0						
9	9				0	0						
10	10				0	0						
11	11				0	0						
12	12				0	0						
13	13				0	0						
14	14				0	0						
15	15				0	0						
16	16				0	0						
17	17				0	0						
18	18				0	0						
19	19				0	0						
20	20				0	0						
21	21				0	0						
22	22				0	0						
23	23				0	0						
24	24				0	0						
25	25				0	0						
26	26				0	0						
27	27				0	0						
28	28				0	0						
29	29				0	0						
30	30				0	0						
31	31				0	0						
32	32				0	0						
33					0	0						
34					0	0						
35					0	0						
36					0	0						
37					0	0						
38					0	0						
39					0	0						
40					0	0						
41					0	0						
42					0	0						
43					0	0						
44					0	0						
45					0	0						
46					0	0						
47					0	0						
48					0	0						
49					0	0						
50					0	0						
51					0	0						
52					0	0						
53					0	0						
54					0	0						
55					0	0						
56					0	0						
57					0	0						
58					0	0						
59					0	0						
60					0	0						
61					0	0						
62					0	0						
63					0	0						
64					0	0						
99	254				0	0						
100	255				0	0						

Douglas County

## Timing Sheet

11/27/2024 10:52:49 AM

**Station : 33 - HR Pkwy & Deer Creek/Westridge Village Pkwy ( Standard File )**

Alternate Phase Program 1, Interval Times [1.1.6.1]

Alternate Phase Program 2, Interval Times [1.1.6.1]

Alternate Phase Program 1, >Phase Options [1.1.6.2]

Alternate Phase Program 2, Phase Options [1.1.6.2]

Alternate Phase Program 3, Phase Options [1.1.6.2]

Alternate Phase Program 1, Calls and Redirection

[1.1.6.3]

Alternate Phase Program 2, Calls and Redirection

### [1.1.6.3]

## Douglas County

## Timing Sheet

11/27/2024 10:52:49 AM

**Station : 33 - HR Pkwy & Deer Creek/Westridge Village Pkwy ( Standard File )**

Detector Alternate Program 1, Vehicle Parameters [5.5.1]

Detector Alternate Program 2, Vehicle Parameters [5.5.1]

## User Input map [1.8.9.1]

## User Output map [1.8.9.2]

## Station : 66 - HR Pkwy &amp; Foothills Canyon ( Standard File )

## Phase [1.1.1]

	<b>φ1 (SWL)</b>	<b>φ2 (NET)</b>	<b>φ3</b>	<b>φ4 (SET)</b>	<b>φ5 (NEL)</b>	<b>φ6 (SWT)</b>	<b>φ7</b>	<b>φ8 (NWT)</b>	<b>φ9</b>	<b>φ10</b>	<b>φ11</b>	<b>φ12</b>	<b>φ13</b>	<b>φ14</b>	<b>φ15</b>	<b>φ16</b>
Walk	0	5	0	5	0	5	0	5	0	0	0	0	0	0	0	0
Ped Clearance	0	15	0	26	0	15	0	27	0	0	0	0	0	0	0	0
Min Green	5	25	0	5	5	25	0	5	0	0	0	0	0	0	0	0
Gap Ext	1.5	3	0	3	1.5	3	0	3	0	0	0	0	0	0	0	0
Max1	10	45	0	30	10	45	0	30	0	0	0	0	0	0	0	0
Max2	8	25	0	15	8	25	0	15	0	0	0	0	0	0	0	0
Yellow Clr	3	4.5	3	3	3	4.5	3	3	3	3	3	3	3	3	3	3
Red Clr	2	2	3	2	2	2	4	2	2	2	2	2	2	2	2	2
Red Revert	5	5	0	5	5	5	0	5	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Flash Entry			ON					ON								
Auto Flash Exit		ON			ON											
Non-Actuated 1																
Non-Actuated 2																

## Phase Option [1.1.2]

	<b>φ1 (SWL)</b>	<b>φ2 (NET)</b>	<b>φ3</b>	<b>φ4 (SET)</b>	<b>φ5 (NEL)</b>	<b>φ6 (SWT)</b>	<b>φ7</b>	<b>φ8 (NWT)</b>	<b>φ9</b>	<b>φ10</b>	<b>φ11</b>	<b>φ12</b>	<b>φ13</b>	<b>φ14</b>	<b>φ15</b>	<b>φ16</b>
Enable	ON	ON		ON	ON	ON		ON								
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON			ON											
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON		ON		ON		ON								
Sim Gap Enable	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON			ON											
Cond Service																
Add Init Calc																

## Phase Option+ [1.1.3]/[1.1.5]

	<b>φ1</b>	<b>φ2</b>	<b>φ3</b>	<b>φ4</b>	<b>φ5</b>	<b>φ6</b>	<b>φ7</b>	<b>φ8</b>	<b>φ9</b>	<b>φ10</b>	<b>φ11</b>	<b>φ12</b>	<b>φ13</b>	<b>φ14</b>	<b>φ15</b>	<b>φ16</b>
Reserve																
Ped Clr Thru Yellow																
Skip Red-NoCall																
Red Rest																
Max 2																
Max Inhibit																
Ped Delay																
Red Rest On Gap																
Conflicting P																
Green Ped Delay Time				15					15							
Omit Yel																
Ped Out																
Start Yel																
Inhibit P1		ON														
Inhibit P2					ON											
Inhibit P3						ON										
Inhibit P4							ON									
Inhibit P5								ON								
Inhibit P6																
Inhibit P7									ON							
Inhibit P8																
Call Phs1																
Call Phs2																
Redirect P Calls From 1																
Redirect P Calls To 1																
Redirect P Calls From 2																
Redirect P Calls To 2																
Redirect P Calls From 3																
Redirect P Calls To 3																
Redirect P Calls From 4																
Redirect P Calls To 4																

Prepared By / Date

Reviewed By / Date



## Douglas County

## Timing Sheet

11/27/2024 10:55:24 AM

**Station :** 66 - HR Pkwy & Foothills Canyon ( Standard File )

## Ring Sequence [1.2.4]

## Unit Parameters [1.2.1]

StartUp Flash	Auto Ped Clear	Red Revert	Local Flash Start	Allow < 3 sec Yel	Allow Skip Yel	MCE Timeout	Enable Run	Start Red Time	Phase Mode	Startup Calls	Diamond Mode	Stop Time Over Preempt	Free Ring Sequence	Clearance Decide	Min Ped Clear Time	RingAlgo
OFF	5	RST	OFF	OFF	ON	6	STD8	OFF	4PH	OFF		1	OFF	OFF		

## Alarms, Parameters [1.4.1]

## Auto Flash Parameter

Yellow	Red	Mode	Source
--------	-----	------	--------

Detector, Vehicle Parameters 1-16 [5.1]

Detector #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Yellow Lock																
Red Lock																
Extend	ON	ON	ON	ON	ON		ON	ON	ON	ON			ON	ON	ON	ON
Added Initial																
Call	ON	ON	ON	ON		ON	ON	ON	ON	ON			ON	ON	ON	ON
Call Phase	1	2	2	2	2	2	3	4	4	4	4	4	1	3	5	6
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0	0	7.5	0	3	0	0	0	0	0	0

Detector, Vehicle Parameters 17-32 [5.1]

## Detector, Ped Detectors 1-16 [5.4]

## Douglas County

## Timing Sheet

11/27/2024 10:55:24 AM

**Station :** 66 - HR Pkwy & Foothills Canyon ( Standard File )

## Channels/SDLC, Assign to Phases [1.8.1]

Channel/SDLC +, Assign to Phases [1.8.4]

### Overlap General Parameters [1.5.1]

Conflict Lock	Lock Inhibit	Program Card	Use Parent	Canadian Fast Flash
OFF	OFF	ON	ALWAYS	

## Overlap Program Parameters [1.5.2.1]

Overlap	Included Phases				Modifier Phases				Type	Green	Yellow	Red
Overlap 1	1				2				FYA-4		3.5	1.5
Overlap 2	3				4				FYA-4		3.5	1.5
Overlap 3	5				6				FYA-4		3.5	1.5
Overlap 4	7				8				FYA-4		3.5	1.5
Overlap 5	3								NORMAL		3.5	1.5
Overlap 6	5								NORMAL		3.5	1.5
Overlap 7									NORMAL		3.5	1.5
Overlap 8									NORMAL		3.5	1.5

#### Overlap Conflict Parameters+ [1.5.2.2]

Overlap	Conflicting Phases		Conflicting Overlaps		Conflicting Peds	
Overlap 1						
Overlap 2						
Overlap 3						
Overlap 4						
Overlap 5						
Overlap 6						
Overlap 7						
Overlap 8						

### Overlap Program Parameters+ [1.5.2.3]



**Station : 66 - HR Pkwy & Foothills Canyon ( Standard File )****Preemption Times[3.1]/Phases[3.2]/Options[3.3]**

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash	ON	ON				
Override Higher Preempt	ON	ON				
Flash in Dwell						
Link to Preempt	0	0	0	0	0	0
Delay	0	0	0	0	0	0
Min Duration	0	0	5	5	5	5
Min Green	0	0	5	5	5	5
Min Walk	0	0	0	0	0	0
Ped Clear	0	0	3	3	3	3
Track Green	0	0	0	0	0	0
Min Dwell	0	0	0	0	0	0
Max Presence	0	0	120	120	120	120
Track Veh 1	0	0	0	0	0	0
Track Veh 2	0	0	0	0	0	0
Track Veh 3	0	0	0	0	0	0
Track Veh 4	0	0	0	0	0	0
Dwell Cyc Veh 1	0	0	2	4	1	8
Dwell Cyc Veh 2	0	0	5	0	6	0
Dwell Cyc Veh 3	0	0	0	0	0	0
Dwell Cyc Veh 4	0	0	0	0	0	0
Dwell Cyc Veh 5	0	0	0	0	0	0
Dwell Cyc Veh 6	0	0	0	0	0	0
Dwell Cyc Veh 7	0	0	0	0	0	0
Dwell Cyc Veh 8	0	0	0	0	0	0
Dwell Cyc Veh 9	0	0	0	0	0	0
Dwell Cyc Veh 10	0	0	0	0	0	0
Dwell Cyc Veh 11	0	0	0	0	0	0
Dwell Cyc Veh 12	0	0	0	0	0	0
Dwell Cyc Ped1	0	0	0	0	0	0
Dwell Cyc Ped2	0	0	0	0	0	0
Dwell Cyc Ped3	0	0	0	0	0	0
Dwell Cyc Ped4	0	0	0	0	0	0
Dwell Cyc Ped5	0	0	0	0	0	0
Dwell Cyc Ped6	0	0	0	0	0	0
Dwell vPed7	0	0	0	0	0	0
Dwell Cyc Ped8	0	0	0	0	0	0
Exit 1	0	0	4	0	4	0
Exit 2	0	0	8	0	8	0
Exit 3	0	0	0	0	0	0
Exit 4	0	0	0	0	0	0

**Preemption Times+[3.4]/Overlaps+[3.5]/Options+[3.6]**

Preempt	1	2	3	4	5	6
Enable			ON	ON	ON	ON
Type	RAIL	RAIL	EMERG	EMERG	EMERG	EMERG
Skip Track						
Volt Mon Flash						
Coord in Preempt						
Return Max/Min	MAX	MAX	MAX	MAX	MAX	MAX
Extend Dwell	0	0	0	0	0	0
Pattern	0	0	0	0	0	0
Output Mode	TS2	TS2	TS2	TS2	TS2	TS2
Track Over 1	0	0	0	0	0	0
Track Over 2	0	0	0	0	0	0
Track Over 3	0	0	0	0	0	0
Track Over 4	0	0	0	0	0	0
Track Over 5	0	0	0	0	0	0
Track Over 6	0	0	0	0	0	0
Track Over 7	0	0	0	0	0	0
Track Over 8	0	0	0	0	0	0
Track Over 9	0	0	0	0	0	0
Track Over 10	0	0	0	0	0	0
Track Over 11	0	0	0	0	0	0
Track Over 12	0	0	0	0	0	0
DwellCyc Over 1	0	0	1	1	1	1
DwellCyc Over 2	0	0	2	2	2	2
DwellCyc Over 3	0	0	3	3	3	3
DwellCyc Over 4	0	0	4	4	4	4
DwellCyc Over 5	0	0	0	0	0	0
DwellCyc Over 6	0	0	0	0	0	0
DwellCyc Over 7	0	0	0	0	0	0
DwellCyc Over 8	0	0	0	0	0	0
DwellCyc Over 9	0	0	0	0	0	0
DwellCyc Over 10	0	0	0	0	0	0
DwellCyc Over 11	0	0	0	0	0	0
DwellCyc Over 12	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0
Yellow	0	0	0	0	0	0
Red	0	0	0	0	0	0
Return Max	0	0	0	0	0	0

**Preemption Adv Times[3.8]/Init Dwell [3.9]**

Preempt	1	2	3	4	5	6
All Red B4 Preempt						
Reset Ext Dwell						
Reservice Preempt						
End Dwell						
DsblDwellCalls						
Enter Yellow Change	25.5	25.5	25.5	25.5	25.5	25.5
Enter Red Clear	25.5	25.5	25.5	25.5	25.5	25.5
Track Yellow Change	25.5	25.5	25.5	25.5	25.5	25.5
Track Red Clear	25.5	25.5	25.5	25.5	25.5	25.5
Dynamic Exit Threshold	0	0	0	0	0	0
Initial Dwell Phase 1	0	0	0	0	0	0
Initial Dwell Phase 2	0	0	0	0	0	0
Initial Dwell Phase 3	0	0	0	0	0	0
Initial Dwell Phase 4	0	0	0	0	0	0
Ped 1	0	0	0	0	0	0
Ped 2	0	0	0	0	0	0
Ped 3	0	0	0	0	0	0
Ped 4	0	0	0	0	0	0
Initial Dwell Overlap 1	0	0	0	0	0	0
Initial Dwell Overlap 2	0	0	0	0	0	0
Initial Dwell Overlap 3	0	0	0	0	0	0
Initial Dwell Overlap 4	0	0	0	0	0	0
Initial Dwell Overlap 5	0	0	0	0	0	0
Initial Dwell Overlap 6	0	0	0	0	0	0
Initial Dwell Overlap 7	0	0	0	0	0	0
Initial Dwell Overlap 8	0	0	0	0	0	0
Initial Dwell Overlap 9	0	0	0	0	0	0
Initial Dwell Overlap 10	0	0	0	0	0	0
Initial Dwell Overlap 11	0	0	0	0	0	0
Initial Dwell Overlap 12	0	0	0	0	0	0
Initial Dwell Overlap 13	0	0	0	0	0	0
Initial Dwell Overlap 14	0	0	0	0	0	0
Initial Dwell Overlap 15	0	0	0	0	0	0

Initial Dwell Overlap 16 0 0 0 0 0 0 0 0

Coordination, Modes, + [2.1]

## Modes

<b>Operational</b>	<b>Correct</b>	<b>Maximum</b>	<b>Force-Off</b>
	SHRT/LNG	MAX INH	FLOAT

Modes+

Mode	Leave Before	Leave After	Recycle	Stop In Walk	External	Auto Reset	Latch Sec Foff	Coord Easy Float	Yield Value	Coord NTCP Yield Sign	Closed Loop Active
RESERVED	TIMED	TIMED	NO RECYLE	ON	OFF	ON	OFF	OFF	0	+	ON OFF

## Coordination, Pattern 1-16 [2.4]

## Coordination, Pattern 17-32 [2.4]

## Coordination, Pattern+ 1-8 [2.5]

## Douglas County

## Timing Sheet

11/27/2024 10:55:24 AM

**Station : 66 - HR Pkwy & Foothills Canyon ( Standard File )**

Coordination, Pattern+ 9-16 [2.5]

Coordination, Pattern+ 17 - 24 [2.5]

Douglas County

## Timing Sheet

11/27/2024 10:55:24 AM

**Station :** 66 - HR Pkwy & Foothills Canyon ( Standard File )

## Coordination, Splits [2.7.1]

<b>Split Table 8</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>
Time																
Mode	NON	NON	NON	NON	NON	NON	NON									
Color	Blue	Red	Green	Yellow	Orange	Purple	Black	White	Grey	Dark Blue	Dark Red	Dark Green	Dark Yellow	Dark Orange	Dark Purple	Dark Black

## Douglas County

## Timing Sheet

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**Station :** 66 - HR Pkwy & Foothills Canyon ( Standard File )

## Douglas County

## Timing Sheet

11/27/2024 10:55:24 AM

**Station : 66 - HR Pkwy & Foothills Canyon ( Standard File )**

## Douglas County

## Timing Sheet

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**Station : 66 - HR Pkwy & Foothills Canyon ( Standard File )**

## TB Coor, Advanced Scheduler [4.3]

## TB Coor, Day Plan [4.4]

## Douglas County

## Timing Sheet

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**Station : 66 - HR Pkwy & Foothills Canyon ( Standard File )**

**Station : 66 - HR Pkwy & Foothills Canyon ( Standard File )****TB Coor, Action Table [4.5]**

Action	Pattern	Aux 1	Aux 2	Aux 3	Special 1	Special 2	Special 3	Special 4	Special 5	Special 6	Special 7	Special 8
1	1				0	0						
2	2				0	0						
3	3				0	0						
4	4				0	0						
5	5				0	0						
6	6				0	0						
7	7				0	0						
8	8				0	0						
9	9				0	0						
10	10				0	0						
11	11				0	0						
12	12				0	0						
13	13				0	0						
14	14				0	0						
15	15				0	0						
16	16				0	0						
17	17				0	0						
18	18				0	0						
19	19				0	0						
20	20				0	0						
21	21				0	0						
22	22				0	0						
23	23				0	0						
24	24				0	0						
25	25				0	0						
26	26				0	0						
27	27				0	0						
28	28				0	0						
29	29				0	0						
30	30				0	0						
31	31				0	0						
32	32				0	0						
33					0	0						
34					0	0						
35					0	0						
36					0	0						
37					0	0						
38					0	0						
39					0	0						
40					0	0						
41					0	0						
42					0	0						
43					0	0						
44					0	0						
45					0	0						
46					0	0						
47					0	0						
48					0	0						
49					0	0						
50					0	0						
51					0	0						
52					0	0						
53					0	0						
54					0	0						
55					0	0						
56					0	0						
57					0	0						
58					0	0						
59					0	0						
60					0	0						
61					0	0						
62					0	0						
63					0	0						
64					0	0						
99	254				0	0						
100	255				0	0						

Douglas County

## Timing Sheet

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**Station : 66 - HR Pkwy & Foothills Canyon ( Standard File )**

Alternate Phase Program 1, Interval Times [1.1.6.1]

Alternate Phase Program 2, Interval Times [1.1.6.1]

Alternate Phase Program 1, >Phase Options [1.1.6.2]

Alternate Phase Program 2, Phase Options [1.1.6.2]

Alternate Phase Program 3, Phase Options [1.1.6.2]

Alternate Phase Program 1, Calls and Redirection

[1.1.6.3]

Alternate Phase Program 2, Calls and Redirection

### [1.1.6.3]

## Douglas County

### Timing Sheet

11/27/2024 10:55:24 AM

**Station :** 66 - HR Pkwy & Foothills Canyon ( Standard File )

Detector Alternate Program 1, Vehicle Parameters [5.5.1]

Detector Alternate Program 2, Vehicle Parameters [5.5.1]

## User Input map [1.8.9.1]

## User Output map [1.8.9.2]

Douglas County

Timing Sheet

11/27/2024 10:54:27 AM

Station : 19 - HR Pkwy &amp; WR Pkwy/Springhill Pkwy ( Standard File )

## Phase [1.1.1]

	$\phi 1$ (SWL)	$\phi 2$ (NET)	$\phi 3$ (NWL)	$\phi 4$ (SET)	$\phi 5$ (NEL)	$\phi 6$ (SWT)	$\phi 7$	$\phi 8$ (NWT)	$\phi 9$	$\phi 10$	$\phi 11$	$\phi 12$	$\phi 13$	$\phi 14$	$\phi 15$	$\phi 16$
Walk	0	5	0	0	0	5	0	5	0	0	0	0	0	0	0	0
Ped Clearance	0	19	0	0	0	20	0	27	0	0	0	0	0	0	0	0
Min Green	5	15	5	13	5	15	5	13	0	0	0	0	0	0	0	0
Gap Ext	1.5	3	2.5	2.5	1.5	3	1.5	2.5	0	0	0	0	0	0	0	0
Max1	25	40	40	25	15	40	15	40	0	0	0	0	0	0	0	0
Max2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yellow Clr	3	4.5	3	4.5	3	4.5	3	4.5	3	3	3	3	3	3	3	3
Red Clr	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Red Revert	0	5	0	5	0	5	0	5	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Flash Entry			ON					ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																

## Phase Option [1.1.2]

	$\phi 1$ (SWL)	$\phi 2$ (NET)	$\phi 3$ (NWL)	$\phi 4$ (SET)	$\phi 5$ (NEL)	$\phi 6$ (SWT)	$\phi 7$	$\phi 8$ (NWT)	$\phi 9$	$\phi 10$	$\phi 11$	$\phi 12$	$\phi 13$	$\phi 14$	$\phi 15$	$\phi 16$
Enable	ON	ON	ON	ON	ON	ON	ON	ON								
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON		ON		ON		ON								
Sim Gap Enable	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk																
Cond Service																
Add Init Calc																

## Phase Option+ [1.1.3]/[1.1.5]

	$\phi 1$	$\phi 2$	$\phi 3$	$\phi 4$	$\phi 5$	$\phi 6$	$\phi 7$	$\phi 8$	$\phi 9$	$\phi 10$	$\phi 11$	$\phi 12$	$\phi 13$	$\phi 14$	$\phi 15$	$\phi 16$
Reserve																
Ped Clr Thru Yellow																
Skip Red-NoCall																
Red Rest																
Max 2																
Max Inhibit																
Ped Delay																
Red Rest On Gap																
Conflicting P																
Green Ped Delay Time	5					5		5								
Omit Yel																
Ped Out																
Start Yel																
Inhibit P1																
Inhibit P2																
Inhibit P3																
Inhibit P4																
Inhibit P5																
Inhibit P6																
Inhibit P7																
Inhibit P8																
Call Phs1																
Call Phs2																
Redirect P Calls From 1																
Redirect P Calls To 1																
Redirect P Calls From 2																
Redirect P Calls To 2																
Redirect P Calls From 3																
Redirect P Calls To 3																
Redirect P Calls From 4																
Redirect P Calls To 4																

Prepared By / Date

Reviewed By / Date



Douglas County

## Timing Sheet

11/27/2024 10:54:27 AM

**Station : 19 - HR Pkwy & WR Pkwy/Springhill Pkwy ( Standard File )**

## Ring Sequence [1.2.4]

## Unit Parameters [1.2.1]

StartUp Flash	Auto Ped Clear	Red Revert	Local Flash Start	Allow < 3 sec Yel	Allow Skip Yel	MCE Timeout	Enable Run	Start Red Time	Phase Mode	Startup Calls	Diamond Mode	Stop Time Over Preempt	Free Ring Sequence	Clearance Decide	Min Ped Clear Time	RingAlgo	
OFF	5	RST	OFF	OFF	ON	6	STD8	OFF	4PH	OFF	I	OFF	OFF	OFF	OFF	OFF	

## Alarms, Parameters [1.4.1]

## Auto Flash Parameter

Yellow	Red	Mode	Source
	60		

Detector, Vehicle Parameters 1-16 [5.1]

Detector #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Yellow Lock																
Red Lock																
Extend	ON	ON	ON	ON	ON		ON	ON	ON	ON		ON	ON	ON	ON	ON
Added Initial	ON	ON	ON	ON	ON		ON	ON	ON	ON		ON	ON	ON	ON	ON
Call	ON	ON	ON	ON		ON	ON	ON	ON	ON		ON	ON	ON	ON	ON
Call Phase	1	2	2	2	2	2	3	4	4	4	4	4	1	3	5	6
Switch Phase	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0	3	0	12	0	0	0	0	0	0	0

Detector, Vehicle Parameters 17-32 [5.1]

## Detector, Ped Detectors 1-16 [5.4]

## Douglas County

## Timing Sheet

11/27/2024 10:54:27 AM

**Station : 19 - HR Pkwy & WR Pkwy/Springhill Pkwy ( Standard File )**

## Channels/SDLC, Assign to Phases [1.8.1]

Channel/SDLC +, Assign to Phases [1.8.4]

### Overlap General Parameters [1.5.1]

<b>Conflict Lock</b>	<b>Lock Inhibit</b>	<b>Program Card</b>	<b>Use Parent</b>	<b>Canadian Fast Flash</b>
OFF	OFF	ON	ALWAYS	

### Overlap Program Parameters [1.5.2.1]

Overlap	Included Phases				Modifier Phases				Type	Green	Yellow	Red
Overlap 1	1				2				FYA-4	4.5		
Overlap 2	3				4				FYA-4	4.5		
Overlap 3	5				6				FYA-4	3		
Overlap 4	7				8				FYA-4	3		
Overlap 5	1								NORMAL	3	2	
Overlap 6	3								NORMAL	3	2	
Overlap 7									NORMAL	3.5	1.5	
Overlap 8									NORMAL	3.5	1.5	

#### Overlap Conflict Parameters+ [1.5.2.2]

Overlap Program Parameters+ [1.5.2.3]



Station : 19 - HR Pkwy &amp; WR Pkwy/Springhill Pkwy ( Standard File )

## Preemption Times[3.1]/Phases[3.2]/Options[3.3]

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash	ON	ON				
Override Higher Preempt	ON	ON				
Flash in Dwell						
Link to Preempt	0	0	0	0	0	0
Delay	0	0	0	0	0	0
Min Duration	0	0	5	5	5	5
Min Green	0	0	5	5	5	5
Min Walk	0	0	0	0	0	0
Ped Clear	0	0	3	3	3	3
Track Green	0	0	0	0	0	0
Min Dwell	0	0	0	0	0	0
Max Presence	0	0	120	120	120	120
Track Veh 1	0	0	0	0	0	0
Track Veh 2	0	0	0	0	0	0
Track Veh 3	0	0	0	0	0	0
Track Veh 4	0	0	0	0	0	0
Dwell Cyc Veh 1	0	0	2	4	1	3
Dwell Cyc Veh 2	0	0	5	7	6	8
Dwell Cyc Veh 3	0	0	0	0	0	0
Dwell Cyc Veh 4	0	0	0	0	0	0
Dwell Cyc Veh 5	0	0	0	0	0	0
Dwell Cyc Veh 6	0	0	0	0	0	0
Dwell Cyc Veh 7	0	0	0	0	0	0
Dwell Cyc Veh 8	0	0	0	0	0	0
Dwell Cyc Veh 9	0	0	0	0	0	0
Dwell Cyc Veh 10	0	0	0	0	0	0
Dwell Cyc Veh 11	0	0	0	0	0	0
Dwell Cyc Veh 12	0	0	0	0	0	0
Dwell Cyc Ped1	0	0	0	0	0	0
Dwell Cyc Ped2	0	0	0	0	0	0
Dwell Cyc Ped3	0	0	0	0	0	0
Dwell Cyc Ped4	0	0	0	0	0	0
Dwell Cyc Ped5	0	0	0	0	0	0
Dwell Cyc Ped6	0	0	0	0	0	0
Dwell vPed7	0	0	0	0	0	0
Dwell Cyc Ped8	0	0	0	0	0	0
Exit 1	0	0	4	4	4	4
Exit 2	0	0	7	7	7	7
Exit 3	0	0	0	0	0	0
Exit 4	0	0	0	0	0	0

## Preemption Times+[3.4]/Overlaps+[3.5]/Options+[3.6]

Preempt	1	2	3	4	5	6
Enable			ON	ON	ON	ON
Type	RAIL	RAIL	EMERG	EMERG	EMERG	EMERG
Skip Track						
Volt Mon Flash						
Coord in Preempt						
Return Max/Min	MAX	MAX	MAX	MAX	MAX	MAX
Extend Dwell	0	0	0	0	0	0
Pattern	0	0	0	0	0	0
Output Mode	TS2	TS2	TS2	TS2	TS2	TS2
Track Over 1	0	0	0	0	0	0
Track Over 2	0	0	0	0	0	0
Track Over 3	0	0	0	0	0	0
Track Over 4	0	0	0	0	0	0
Track Over 5	0	0	0	0	0	0
Track Over 6	0	0	0	0	0	0
Track Over 7	0	0	0	0	0	0
Track Over 8	0	0	0	0	0	0
Track Over 9	0	0	0	0	0	0
Track Over 10	0	0	0	0	0	0
Track Over 11	0	0	0	0	0	0
Track Over 12	0	0	0	0	0	0
DwellCyc Over 1	0	0	1	1	1	1
DwellCyc Over 2	0	0	2	2	2	2
DwellCyc Over 3	0	0	3	3	3	3
DwellCyc Over 4	0	0	4	4	4	4
DwellCyc Over 5	0	0	0	0	0	0
DwellCyc Over 6	0	0	0	0	0	0
DwellCyc Over 7	0	0	0	0	0	0
DwellCyc Over 8	0	0	0	0	0	0
DwellCyc Over 9	0	0	0	0	0	0
DwellCyc Over 10	0	0	0	0	0	0
DwellCyc Over 11	0	0	0	0	0	0
DwellCyc Over 12	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0
Yellow	0	0	0	0	0	0
Red	0	0	0	0	0	0
Return Max	0	0	0	0	0	0

## Preemption Adv Times[3.8]/Init Dwell [3.9]

Preempt	1	2	3	4	5	6
All Red B4 Preempt						
Reset Ext Dwell						
Reservice Preempt						
End Dwell						
DsblDwellCalls						
Enter Yellow Change	25.5	25.5	25.5	25.5	25.5	25.5
Enter Red Clear	25.5	25.5	25.5	25.5	25.5	25.5
Track Yellow Change	25.5	25.5	25.5	25.5	25.5	25.5
Track Red Clear	25.5	25.5	25.5	25.5	25.5	25.5
Dynamic Exit Threshold	0	0	0	0	0	0
Initial Dwell Phase 1	0	0	0	0	0	0
Initial Dwell Phase 2	0	0	0	0	0	0
Initial Dwell Phase 3	0	0	0	0	0	0
Initial Dwell Phase 4	0	0	0	0	0	0
Ped 1	0	0	0	0	0	0
Ped 2	0	0	0	0	0	0
Ped 3	0	0	0	0	0	0
Ped 4	0	0	0	0	0	0
Initial Dwell Overlap 1	0	0	0	0	0	0
Initial Dwell Overlap 2	0	0	0	0	0	0
Initial Dwell Overlap 3	0	0	0	0	0	0
Initial Dwell Overlap 4	0	0	0	0	0	0
Initial Dwell Overlap 5	0	0	0	0	0	0
Initial Dwell Overlap 6	0	0	0	0	0	0
Initial Dwell Overlap 7	0	0	0	0	0	0
Initial Dwell Overlap 8	0	0	0	0	0	0
Initial Dwell Overlap 9	0	0	0	0	0	0
Initial Dwell Overlap 10	0	0	0	0	0	0
Initial Dwell Overlap 11	0	0	0	0	0	0
Initial Dwell Overlap 12	0	0	0	0	0	0
Initial Dwell Overlap 13	0	0	0	0	0	0
Initial Dwell Overlap 14	0	0	0	0	0	0
Initial Dwell Overlap 15	0	0	0	0	0	0

Initial Dwell Overlap 16      0      0      0      0      0      0      0      0

## Coordination, Modes, + [2.1]

## Modes

<b>Operational</b>	<b>Correct</b>	<b>Maximum</b>	<b>Force-Off</b>
	SHRT/LNG	MAX INH	FLOAT

Modes+												
Mode	Leave Before	Leave After	Recycle	Stop In Walk	External	Auto Reset	Latch Sec Foff	Coord Easy Float	Yield Value	Coord NTCIP Yield Sign	Closed Loop Active	
RESERVED	TIMED	TIMED	NO RECYLE	ON	OFF	ON	OFF	OFF	0	+	ON	OFF

## Coordination, Pattern 1-16 [2.4]

## Coordination, Pattern 17-32 [2.4]

## Coordination, Pattern+ 1-8 [2.5]

## Douglas County

## Timing Sheet

11/27/2024 10:54:27 AM

**Station : 19 - HR Pkwy & WR Pkwy/Springhill Pkwy ( Standard File )**

## Coordination, Pattern+ 9-16 [2.5]

## Coordination, Pattern+ 17 - 24 [2.5]

**Station : 19 - HR Pkwy & WR Pkwy/Springhill Pkwy ( Standard File )**

## Coordination, Splits [2.7.1]

<b>Split Table 8</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>
Time																
Mode	NON	NON	NON	NON	NON	NON	NON									
Color	Red	Blue	Green	Yellow	Orange	Purple	Black	White	Grey	Dark Blue	Light Blue	Dark Green	Light Green	Dark Yellow	Light Yellow	Dark Orange

## Douglas County

## Timing Sheet

11/27/2024 10:54:27 AM

**Station : 19 - HR Pkwy & WR Pkwy/Springhill Pkwy ( Standard File )**

Split Table 22	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON															
Group	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	

## Douglas County

## Timing Sheet

11/27/2024 10:54:27 AM

**Station : 19 - HR Pkwy & WR Pkwy/Springhill Pkwy ( Standard File )**

## Douglas County

## Timing Sheet

11/27/2024 10:54:27 AM

**Station : 19 - HR Pkwy & WR Pkwy/Springhill Pkwy ( Standard File )**

## TB Coor, Advanced Scheduler [4.3]

## TB Coor, Day Plan [4.4]

## Douglas County

## Timing Sheet

11/27/2024 10:54:27 AM

**Station : 19 - HR Pkwy & WR Pkwy/Springhill Pkwy ( Standard File )**

**Station : 19 - HR Pkwy & WR Pkwy/Springhill Pkwy ( Standard File )**

**TB Coor, Action Table [4.5]**

Action	Pattern	Aux 1	Aux 2	Aux 3	Special 1	Special 2	Special 3	Special 4	Special 5	Special 6	Special 7	Special 8
1	1				0	0						
2	2				0	0						
3	3				0	0						
4	4				0	0						
5	5				0	0						
6	6				0	0						
7	7				0	0						
8	8				0	0						
9	9				0	0						
10	10				0	0						
11	11				0	0						
12	12				0	0						
13	13				0	0						
14	14				0	0						
15	15				0	0						
16	16				0	0						
17	17				0	0						
18	18				0	0						
19	19				0	0						
20	20				0	0						
21	21				0	0						
22	22				0	0						
23	23				0	0						
24	24				0	0						
25	25				0	0						
26	26				0	0						
27	27				0	0						
28	28				0	0						
29	29				0	0						
30	30				0	0						
31	31				0	0						
32	32				0	0						
33					0	0						
34					0	0						
35					0	0						
36					0	0						
37					0	0						
38					0	0						
39					0	0						
40					0	0						
41					0	0						
42					0	0						
43					0	0						
44					0	0						
45					0	0						
46					0	0						
47					0	0						
48					0	0						
49					0	0						
50					0	0						
51					0	0						
52					0	0						
53					0	0						
54					0	0						
55					0	0						
56					0	0						
57					0	0						
58					0	0						
59					0	0						
60					0	0						
61					0	0						
62					0	0						
63					0	0						
64					0	0						
99	254				0	0						
100	255				0	0						

Douglas County

## Timing Sheet

11/27/2024 10:54:27 AM

**Station : 19 - HR Pkwy & WR Pkwy/Springhill Pkwy ( Standard File )**

Alternate Phase Program 1, Interval Times [1.1.6.1]

Alternate Phase Program 2, Interval Times [1.1.6.1]

Alternate Phase Program 1, >Phase Options [1.1.6.2]

Alternate Phase Program 2, Phase Options [1.1.6.2]

Alternate Phase Program 3, Phase Options [1.1.6.2]

Alternate Phase Program 1, Calls and Redirection

[1.1.6.3]

Alternate Phase Program 2, Calls and Redirection

[1.1.6.3]

## Douglas County

## Timing Sheet

11/27/2024 10:54:27 AM

**Station : 19 - HR Pkwy & WR Pkwy/Springhill Pkwy ( Standard File )**

Detector Alternate Program 1, Vehicle Parameters [5.5.1]

Detector Alternate Program 2, Vehicle Parameters [5.5.1]

## User Input map [1.8.9.1]

## User Output map [1.8.9.2]

Station : 100 - HR Pkwy &amp; Desert Willow/Westridge Knolls ( Standard File )

## Phase [1.1.1]

	<b>φ1</b>	<b>φ2 (ET)</b>	<b>φ3</b>	<b>φ4 (ST)</b>	<b>φ5</b>	<b>φ6 (WT)</b>	<b>φ7</b>	<b>φ8 (NT)</b>	<b>φ9</b>	<b>φ10</b>	<b>φ11</b>	<b>φ12</b>	<b>φ13</b>	<b>φ14</b>	<b>φ15</b>	<b>φ16</b>
Walk	0	5	0	5	0	5	0	5	0	0	0	0	0	0	0	0
Ped Clearance	0	10	0	22	0	10	0	22	0	0	0	0	0	0	0	0
Min Green	0	25	0	5	0	25	0	5	0	0	0	0	0	0	0	0
Gap Ext	0	3	0	2	0	3	0	2	0	0	0	0	0	0	0	0
Max1	0	45	0	25	0	45	0	45	0	0	0	0	0	0	0	0
Max2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yellow Clr	0	4.5	0	3	0	4.5	0	3	3	3	3	3	3	3	3	3
Red Clr	0	2	0	2	0	2	0	2	2	2	2	2	2	2	2	2
Red Revert	0	5	0	5	0	5	0	5	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																

## Phase Option [1.1.2]

	<b>φ1</b>	<b>φ2 (ET)</b>	<b>φ3</b>	<b>φ4 (ST)</b>	<b>φ5</b>	<b>φ6 (WT)</b>	<b>φ7</b>	<b>φ8 (NT)</b>	<b>φ9</b>	<b>φ10</b>	<b>φ11</b>	<b>φ12</b>	<b>φ13</b>	<b>φ14</b>	<b>φ15</b>	<b>φ16</b>
Enable		ON		ON		ON										
Lock Call								ON	ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON		ON		ON		ON								
Sim Gap Enable	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																

## Phase Option+ [1.1.3]/[1.1.5]

	<b>φ1</b>	<b>φ2</b>	<b>φ3</b>	<b>φ4</b>	<b>φ5</b>	<b>φ6</b>	<b>φ7</b>	<b>φ8</b>	<b>φ9</b>	<b>φ10</b>	<b>φ11</b>	<b>φ12</b>	<b>φ13</b>	<b>φ14</b>	<b>φ15</b>	<b>φ16</b>
Reserve																
Ped Clr Thru Yellow																
Skip Red-NoCall																
Red Rest																
Max 2																
Max Inhibit																
Ped Delay																
Red Rest On Gap																
Conflicting P																
Green Ped Delay Time																
Omit Yel																
Ped Out																
Start Yel																
Inhibit P1																
Inhibit P2																
Inhibit P3																
Inhibit P4																
Inhibit P5																
Inhibit P6																
Inhibit P7																
Inhibit P8																
Call Phs1																
Call Phs2																
Redirect P Calls From 1																
Redirect P Calls To 1																
Redirect P Calls From 2																
Redirect P Calls To 2																
Redirect P Calls From 3																
Redirect P Calls To 3																
Redirect P Calls From 4																
Redirect P Calls To 4																

Prepared By / Date

Reviewed By / Date



Douglas County

## Timing Sheet

11/27/2024 10:56:16 AM

**Station :** 100 - HR Pkwy & Desert Willow/Westridge Knolls ( Standard File )

## Ring Sequence [1.2.4]

## Unit Parameters [1.2.1]

StartUp Flash	Auto Ped Clear	Red Revert	Local Flash Start	Allow < 3 sec Yel	Allow Skip Yel	MCE Timeout	Enable Run	Start Red Time	Phase Mode	Startup Calls	Diamond Mode	Stop Time Over Preempt	Free Ring Sequence	Clearance Decide	Min Ped Clear Time	RingAlgo
OFF	5	RST	OFF	OFF	ON	6	STD8	OFF	4PH	OFF		1	OFF	OFF		

## Alarms, Parameters [1.4.1]

## Auto Flash Parameter

<b>Yellow</b>	<b>Red</b>	<b>Mode</b>	<b>Source</b>
	60		

Detector, Vehicle Parameters 1-16 [5.1]

Detector #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Yellow Lock																
Red Lock																
Extend	ON	ON	ON	ON	ON		ON	ON	ON	ON			ON	ON	ON	ON
Added Initial																
Call	ON	ON	ON	ON		ON	ON	ON	ON	ON			ON	ON	ON	ON
Call Phase	1	2	2	2	2	2	3	4	4	4	4	4	1	3	5	6
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0	0	7.5	0	3	0	0	0	0	0	0

Detector, Vehicle Parameters 17-32 [5.1]

## Detector, Ped Detectors 1-16 [5.4]

## Douglas County

## Timing Sheet

11/27/2024 10:56:16 AM

**Station :** 100 - HR Pkwy & Desert Willow/Westridge Knolls ( Standard File )

## Channels/SDLC, Assign to Phases [1.8.1]

Channel/SDLC +, Assign to Phases [1.8.4]

## Overlap General Parameters [1.5.1]

<b>Conflict Lock</b>	<b>Lock Inhibit</b>	<b>Program Card</b>	<b>Use Parent</b>	<b>Canadian Fast Flash</b>
OFF	OFF	ON	ALWAYS	

### Overlap Program Parameters [1.5.2.1]

Overlap	Included Phases				Modifier Phases				Type	Green	Yellow	Red
Overlap 1									-GRYEL	3.5	1.5	
Overlap 2									-GRYEL	3.5	1.5	
Overlap 3									NORMAL	3.5	1.5	
Overlap 4									NORMAL	3.5	1.5	
Overlap 5									NORMAL	3.5	1.5	
Overlap 6									NORMAL	3.5	1.5	
Overlap 7									NORMAL	3.5	1.5	
Overlap 8									NORMAL	3.5	1.5	

### Overlap Conflict Parameters+ [1.5.2.2]

Overlap	Conflicting Phases		Conflicting Overlaps		Conflicting Peds	
Overlap 1						
Overlap 2						
Overlap 3						
Overlap 4						
Overlap 5						
Overlap 6						
Overlap 7						
Overlap 8						

### Overlap Program Parameters+ [1.5.2.3]



Station : 100 - HR Pkwy &amp; Desert Willow/Westridge Knolls ( Standard File )

## Preemption Times[3.1]/Phases[3.2]/Options[3.3]

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash	ON	ON				
Override Higher Preempt	ON	ON				
Flash in Dwell						
Link to Preempt	0	0	0	0	0	0
Delay	0	0	0	0	0	0
Min Duration	0	0	5	5	5	5
Min Green	0	0	5	5	5	5
Min Walk	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0
Track Green	0	0	0	0	0	0
Min Dwell	0	0	0	0	0	0
Max Presence	0	0	120	120	120	120
Track Veh 1	0	0	0	0	0	0
Track Veh 2	0	0	0	0	0	0
Track Veh 3	0	0	0	0	0	0
Track Veh 4	0	0	0	0	0	0
Dwell Cyc Veh 1	0	0	2	4	6	4
Dwell Cyc Veh 2	0	0	0	8	0	8
Dwell Cyc Veh 3	0	0	0	0	0	0
Dwell Cyc Veh 4	0	0	0	0	0	0
Dwell Cyc Veh 5	0	0	0	0	0	0
Dwell Cyc Veh 6	0	0	0	0	0	0
Dwell Cyc Veh 7	0	0	0	0	0	0
Dwell Cyc Veh 8	0	0	0	0	0	0
Dwell Cyc Veh 9	0	0	0	0	0	0
Dwell Cyc Veh 10	0	0	0	0	0	0
Dwell Cyc Veh 11	0	0	0	0	0	0
Dwell Cyc Veh 12	0	0	0	0	0	0
Dwell Cyc Ped1	0	0	0	0	0	0
Dwell Cyc Ped2	0	0	0	0	0	0
Dwell Cyc Ped3	0	0	0	0	0	0
Dwell Cyc Ped4	0	0	0	0	0	0
Dwell Cyc Ped5	0	0	0	0	0	0
Dwell Cyc Ped6	0	0	0	0	0	0
Dwell vPed7	0	0	0	0	0	0
Dwell Cyc Ped8	0	0	0	0	0	0
Exit 1	0	0	4	0	4	0
Exit 2	0	0	8	0	8	0
Exit 3	0	0	0	0	0	0
Exit 4	0	0	0	0	0	0

## Preemption Times+[3.4]/Overlaps+[3.5]/Options+[3.6]

Preempt	1	2	3	4	5	6
Enable			ON	ON	ON	ON
Type	RAIL	RAIL	EMERG	EMERG	EMERG	EMERG
Skip Track						
Volt Mon Flash						
Coord in Preempt						
Return Max/Min	MAX	MAX	MAX	MAX	MAX	MAX
Extend Dwell	0	0	0	0	0	0
Pattern	0	0	0	0	0	0
Output Mode	TS2	TS2	TS2	TS2	TS2	TS2
Track Over 1	0	0	0	0	0	0
Track Over 2	0	0	0	0	0	0
Track Over 3	0	0	0	0	0	0
Track Over 4	0	0	0	0	0	0
Track Over 5	0	0	0	0	0	0
Track Over 6	0	0	0	0	0	0
Track Over 7	0	0	0	0	0	0
Track Over 8	0	0	0	0	0	0
Track Over 9	0	0	0	0	0	0
Track Over 10	0	0	0	0	0	0
Track Over 11	0	0	0	0	0	0
Track Over 12	0	0	0	0	0	0
DwellCyc Over 1	0	0	0	0	0	0
DwellCyc Over 2	0	0	0	0	0	0
DwellCyc Over 3	0	0	0	0	0	0
DwellCyc Over 4	0	0	0	0	0	0
DwellCyc Over 5	0	0	0	0	0	0
DwellCyc Over 6	0	0	0	0	0	0
DwellCyc Over 7	0	0	0	0	0	0
DwellCyc Over 8	0	0	0	0	0	0
DwellCyc Over 9	0	0	0	0	0	0
DwellCyc Over 10	0	0	0	0	0	0
DwellCyc Over 11	0	0	0	0	0	0
DwellCyc Over 12	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0
Yellow	0	0	0	0	0	0
Red	0	0	0	0	0	0
Return Max	0	0	0	0	0	0

## Preemption Adv Times[3.8]/Init Dwell [3.9]

Preempt	1	2	3	4	5	6
All Red B4 Preempt						
Reset Ext Dwell						
Reservice Preempt						
End Dwell						
DsblDwellCalls						
Enter Yellow Change	25.5	25.5	25.5	25.5	25.5	25.5
Enter Red Clear	25.5	25.5	25.5	25.5	25.5	25.5
Track Yellow Change	25.5	25.5	25.5	25.5	25.5	25.5
Track Red Clear	25.5	25.5	25.5	25.5	25.5	25.5
Dynamic Exit Threshold	0	0	0	0	0	0
Initial Dwell Phase 1	0	0	0	0	0	0
Initial Dwell Phase 2	0	0	0	0	0	0
Initial Dwell Phase 3	0	0	0	0	0	0
Initial Dwell Phase 4	0	0	0	0	0	0
Ped 1	0	0	0	0	0	0
Ped 2	0	0	0	0	0	0
Ped 3	0	0	0	0	0	0
Ped 4	0	0	0	0	0	0
Initial Dwell Overlap 1	0	0	0	0	0	0
Initial Dwell Overlap 2	0	0	0	0	0	0
Initial Dwell Overlap 3	0	0	0	0	0	0
Initial Dwell Overlap 4	0	0	0	0	0	0
Initial Dwell Overlap 5	0	0	0	0	0	0
Initial Dwell Overlap 6	0	0	0	0	0	0
Initial Dwell Overlap 7	0	0	0	0	0	0
Initial Dwell Overlap 8	0	0	0	0	0	0
Initial Dwell Overlap 9	0	0	0	0	0	0
Initial Dwell Overlap 10	0	0	0	0	0	0
Initial Dwell Overlap 11	0	0	0	0	0	0
Initial Dwell Overlap 12	0	0	0	0	0	0
Initial Dwell Overlap 13	0	0	0	0	0	0
Initial Dwell Overlap 14	0	0	0	0	0	0
Initial Dwell Overlap 15	0	0	0	0	0	0

Initial Dwell Overlap 16      0      0      0      0      0      0      0      0

Coordination, Modes, + [2.1]

## Modes

<b>Operational</b>	<b>Correct</b>	<b>Maximum</b>	<b>Force-Off</b>
	SHRT/LNG	MAX INH	FLOAT

Modes+

Mode	Leave Before	Leave After	Recycle	Stop In Walk	External	Auto Reset	Latch Sec Foff	Coord Easy Float	Yield Value	Coord NTCIP Yield Sign	Closed Loop Active
RESERVED	TIMED	TIMED	NO RECYCLE	ON	OFF	ON	OFF	OFF	0	+	ON OFF

## Coordination, Pattern 1-16 [2.4]

## Coordination, Pattern 17-32 [2.4]

## Coordination, Pattern+ 1-8 [2.5]

## Douglas County

## Timing Sheet

11/27/2024 10:56:16 AM

**Station : 100 - HR Pkwy & Desert Willow/Westridge Knolls ( Standard File )**

## Coordination, Pattern+ 9-16 [2.5]

## Coordination, Pattern+ 17 - 24 [2.5]

## Douglas County

## Timing Sheet

11/27/2024 10:56:16 AM

**Station :** 100 - HR Pkwy & Desert Willow/Westridge Knolls ( Standard File )

## Coordination, Splits [2.7.1]

## Douglas County

## Timing Sheet

11/27/2024 10:56:16 AM

**Station :** 100 - HR Pkwy & Desert Willow/Westridge Knolls ( Standard File )

## Douglas County

## Timing Sheet

11/27/2024 10:56:16 AM

**Station :** 100 - HR Pkwy & Desert Willow/Westridge Knolls ( Standard File )

Douglas County

## Timing Sheet

11/27/2024 10:56:16 AM

**Station :** 100 - HR Pkwy & Desert Willow/Westridge Knolls ( Standard File )

## TB Coor, Advanced Scheduler [4.3]

## TB Coor, Day Plan [4.4]

## Douglas County

## Timing Sheet

11/27/2024 10:56:16 AM

**Station :** 100 - HR Pkwy & Desert Willow/Westridge Knolls ( Standard File )

**Station : 100 - HR Pkwy & Desert Willow/Westridge Knolls ( Standard File )**

**TB Coor, Action Table [4.5]**

Action	Pattern	Aux 1	Aux 2	Aux 3	Special 1	Special 2	Special 3	Special 4	Special 5	Special 6	Special 7	Special 8
1	1				0	0						
2	2				0	0						
3	3				0	0						
4	4				0	0						
5	5				0	0						
6	6				0	0						
7	7				0	0						
8	8				0	0						
9	9				0	0						
10	10				0	0						
11	11				0	0						
12	12				0	0						
13	13				0	0						
14	14				0	0						
15	15				0	0						
16	16				0	0						
17	17				0	0						
18	18				0	0						
19	19				0	0						
20	20				0	0						
21	21				0	0						
22	22				0	0						
23	23				0	0						
24	24				0	0						
25	25				0	0						
26	26				0	0						
27	27				0	0						
28	28				0	0						
29	29				0	0						
30	30				0	0						
31	31				0	0						
32	32				0	0						
33					0	0						
34					0	0						
35					0	0						
36					0	0						
37					0	0						
38					0	0						
39					0	0						
40					0	0						
41					0	0						
42					0	0						
43					0	0						
44					0	0						
45					0	0						
46					0	0						
47					0	0						
48					0	0						
49					0	0						
50					0	0						
51					0	0						
52					0	0						
53					0	0						
54					0	0						
55					0	0						
56					0	0						
57					0	0						
58					0	0						
59					0	0						
60					0	0						
61					0	0						
62					0	0						
63					0	0						
64					0	0						
99	254				0	0						
100	255				0	0						

## Douglas County

## Timing Sheet

11/27/2024 10:56:16 AM

**Station :** 100 - HR Pkwy & Desert Willow/Westridge Knolls ( Standard File )

Alternate Phase Program 1, Interval Times [1.1.6.1]

Alternate Phase Program 2, Interval Times [1.1.6.1]

Alternate Phase Program 1, >Phase Options [1.1.6.2]

Alternate Phase Program 2, Phase Options [1.1.6.2]

Alternate Phase Program 3, Phase Options [1.1.6.2]

Alternate Phase Program 1, Calls and Redirection

[1.1.6.3]

Alternate Phase Program 2, Calls and Redirection

[1.1.6.3]

## Douglas County

## Timing Sheet

11/27/2024 10:56:16 AM

**Station :** 100 - HR Pkwy & Desert Willow/Westridge Knolls ( Standard File )

Detector Alternate Program 1, Vehicle Parameters [5.5.1]

Detector Alternate Program 2, Vehicle Parameters [5.5.1]

## User Input map [1.8.9.1]

## User Output map [1.8.9.2]

Station : 68 - WR Pkwy &amp; Mountain Maple ( Standard File )

## Phase [1.1.1]

	$\phi 1$ (SEL)	$\phi 2$ (NWT)	$\phi 3$	$\phi 4$ (NET)	$\phi 5$ (NWL)	$\phi 6$ (SET)	$\phi 7$	$\phi 8$ (SWT)	$\phi 9$	$\phi 10$	$\phi 11$	$\phi 12$	$\phi 13$	$\phi 14$	$\phi 15$	$\phi 16$
Walk	0	5	0	5	0	5	0	5	0	0	0	0	0	0	0	0
Ped Clearance	0	21	0	27	0	15	0	24	0	0	0	0	0	0	0	0
Min Green	5	25	0	5	5	25	0	5	0	0	0	0	0	0	0	0
Gap Ext	3	3	0	2	2	3	0	2	0	0	0	0	0	0	0	0
Max1	30	40	0	35	15	40	0	35	0	0	0	0	0	0	0	0
Max2	8	20	0	13	8	20	0	13	0	0	0	0	0	0	0	0
Yellow Clr	3	4.5	0	3	3	4.5	0	3	3	3	3	3	3	3	3	3
Red Clr	1	2	0	2	1	2	0	2	2	2	2	2	2	2	2	2
Red Revert	5	5	0	5	5	5	0	5	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Flash Entry			ON				ON									
Auto Flash Exit		ON			ON											
Non-Actuated 1																
Non-Actuated 2																

## Phase Option [1.1.2]

	$\phi 1$ (SEL)	$\phi 2$ (NWT)	$\phi 3$	$\phi 4$ (NET)	$\phi 5$ (NWL)	$\phi 6$ (SET)	$\phi 7$	$\phi 8$ (SWT)	$\phi 9$	$\phi 10$	$\phi 11$	$\phi 12$	$\phi 13$	$\phi 14$	$\phi 15$	$\phi 16$
Enable	ON	ON		ON	ON	ON		ON								
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON		ON		ON		ON								
Sim Gap Enable	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON			ON											
Cond Service																
Add Init Calc																

## Phase Option+ [1.1.3]/[1.1.5]

	$\phi 1$	$\phi 2$	$\phi 3$	$\phi 4$	$\phi 5$	$\phi 6$	$\phi 7$	$\phi 8$	$\phi 9$	$\phi 10$	$\phi 11$	$\phi 12$	$\phi 13$	$\phi 14$	$\phi 15$	$\phi 16$
Reserve																
Ped Clr Thru Yellow																
Skip Red-NoCall																
Red Rest																
Max 2																
Max Inhibit																
Ped Delay																
Red Rest On Gap																
Conflicting P																
Green Ped Delay Time				10		10		10								
Omit Yel																
Ped Out																
Start Yel																
Inhibit P1		ON														
Inhibit P2																
Inhibit P3																
Inhibit P4																
Inhibit P5							ON									
Inhibit P6																
Inhibit P7																
Inhibit P8																
Call Phs1																
Call Phs2																
Redirect P Calls From 1																
Redirect P Calls To 1																
Redirect P Calls From 2																
Redirect P Calls To 2																
Redirect P Calls From 3																
Redirect P Calls To 3																
Redirect P Calls From 4																
Redirect P Calls To 4																

Prepared By / Date

Reviewed By / Date



## Douglas County

## Timing Sheet

11/27/2024 10:57:35 AM

**Station : 68 - WR Pkwy & Mountain Maple ( Standard File )**

## Ring Sequence [1.2.4]

## Unit Parameters [1.2.1]

StartUp Flash	Auto Ped Clear	Red Revert	Local Flash Start	Allow < 3 sec Yel	Allow Skip Yel	MCE Timeout	Enable Run	Start Red Time	Phase Mode	Startup Calls	Diamond Mode	Stop Time Over Preempt	Free Ring Sequence	Clearance Decide	Min Ped Clear Time	RingAlgo	
OFF	5	RST	OFF	OFF	ON	6	STD8	OFF	4PH	OFF	I	OFF	OFF	OFF	OFF	OFF	

## Alarms, Parameters [1.4.1]

## Auto Flash Parameter

Yellow	Red	Mode	Source
--------	-----	------	--------

Detector, Vehicle Parameters 1-16 [5.1]

Detector #	1	2 (NT1)	3	4	5	6 (ST1)	7	8 (WT1)	9	10	11	12	13	14	15	16
Yellow Lock																
Red Lock																
Extend	ON	ON	ON	ON	ON		ON	ON	ON	ON	ON		ON	ON	ON	ON
Added Initial																
Call	ON	ON	ON	ON		ON	ON	ON	ON	ON		ON	ON	ON	ON	ON
Call Phase	1	2	2	2	2	2	3	4	4	4	4	4	1	3	5	6
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0	0	7.5	0	3	0	0	0	0	0	0

## Detector, Vehicle Parameters 17-32 [5.1]

Detector, Ped Detectors 1-16 [5.4]

## Douglas County

## Timing Sheet

11/27/2024 10:57:35 AM

**Station : 68 - WR Pkwy & Mountain Maple ( Standard File )**

## Channels/SDLC, Assign to Phases [1.8.1]

Channel/SDLC +, Assign to Phases [1.8.4]

### Overlap General Parameters [1.5.1]

Conflict Lock	Lock Inhibit	Program Card	Use Parent	Canadian Fast Flash
OFF	OFF	ON	ALWAYS	

### Overlap Program Parameters [1.5.2.1]

Overlap	Included Phases			Modifier Phases			Type	Green	Yellow	Red
Overlap 1							-GRYEL	3.5	1.5	
Overlap 2							-GRYEL	3.5	1.5	
Overlap 3							NORMAL	3.5	1.5	
Overlap 4							NORMAL	3.5	1.5	
Overlap 5							NORMAL	3.5	1.5	
Overlap 6							NORMAL	3.5	1.5	
Overlap 7							NORMAL	3.5	1.5	
Overlap 8							NORMAL	3.5	1.5	

#### Overlap Conflict Parameters+ [1.5.2.2]

Overlap	Conflicting Phases		Conflicting Overlaps		Conflicting Peds	
Overlap 1						
Overlap 2						
Overlap 3						
Overlap 4						
Overlap 5						
Overlap 6						
Overlap 7						
Overlap 8						

### Overlap Program Parameters+ [1.5.2.3]



Station : 68 - WR Pkwy &amp; Mountain Maple ( Standard File )

## Preemption Times[3.1]/Phases[3.2]/Options[3.3]

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash	ON	ON				
Override Higher Preempt	ON	ON				
Flash in Dwell						
Link to Preempt	0	0	0	0	0	0
Delay	0	0	0	0	0	0
Min Duration	0	0	5	5	5	5
Min Green	0	0	5	5	5	5
Min Walk	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0
Track Green	0	0	0	0	0	0
Min Dwell	0	0	0	0	0	0
Max Presence	0	0	120	120	120	120
Track Veh 1	0	0	0	0	0	0
Track Veh 2	0	0	0	0	0	0
Track Veh 3	0	0	0	0	0	0
Track Veh 4	0	0	0	0	0	0
Dwell Cyc Veh 1	0	0	2	4	1	8
Dwell Cyc Veh 2	0	0	5	0	6	0
Dwell Cyc Veh 3	0	0	0	0	0	0
Dwell Cyc Veh 4	0	0	0	0	0	0
Dwell Cyc Veh 5	0	0	0	0	0	0
Dwell Cyc Veh 6	0	0	0	0	0	0
Dwell Cyc Veh 7	0	0	0	0	0	0
Dwell Cyc Veh 8	0	0	0	0	0	0
Dwell Cyc Veh 9	0	0	0	0	0	0
Dwell Cyc Veh 10	0	0	0	0	0	0
Dwell Cyc Veh 11	0	0	0	0	0	0
Dwell Cyc Veh 12	0	0	0	0	0	0
Dwell Cyc Ped1	0	0	0	0	0	0
Dwell Cyc Ped2	0	0	0	0	0	0
Dwell Cyc Ped3	0	0	0	0	0	0
Dwell Cyc Ped4	0	0	0	0	0	0
Dwell Cyc Ped5	0	0	0	0	0	0
Dwell Cyc Ped6	0	0	0	0	0	0
Dwell vPed7	0	0	0	0	0	0
Dwell Cyc Ped8	0	0	0	0	0	0
Exit 1	0	0	4	0	4	0
Exit 2	0	0	8	0	8	0
Exit 3	0	0	0	0	0	0
Exit 4	0	0	0	0	0	0

## Preemption Times+[3.4]/Overlaps+[3.5]/Options+[3.6]

Preempt	1	2	3	4	5	6
Enable			ON	ON	ON	ON
Type	RAIL	RAIL	EMERG	EMERG	EMERG	EMERG
Skip Track						
Volt Mon Flash						
Coord in Preempt						
Return Max/Min	MAX	MAX	MAX	MAX	MAX	MAX
Extend Dwell	0	0	0	0	0	0
Pattern	0	0	0	0	0	0
Output Mode	TS2	TS2	TS2	TS2	TS2	TS2
Track Over 1	0	0	0	0	0	0
Track Over 2	0	0	0	0	0	0
Track Over 3	0	0	0	0	0	0
Track Over 4	0	0	0	0	0	0
Track Over 5	0	0	0	0	0	0
Track Over 6	0	0	0	0	0	0
Track Over 7	0	0	0	0	0	0
Track Over 8	0	0	0	0	0	0
Track Over 9	0	0	0	0	0	0
Track Over 10	0	0	0	0	0	0
Track Over 11	0	0	0	0	0	0
Track Over 12	0	0	0	0	0	0
DwellCyc Over 1	0	0	0	0	0	0
DwellCyc Over 2	0	0	0	0	0	0
DwellCyc Over 3	0	0	0	0	0	0
DwellCyc Over 4	0	0	0	0	0	0
DwellCyc Over 5	0	0	0	0	0	0
DwellCyc Over 6	0	0	0	0	0	0
DwellCyc Over 7	0	0	0	0	0	0
DwellCyc Over 8	0	0	0	0	0	0
DwellCyc Over 9	0	0	0	0	0	0
DwellCyc Over 10	0	0	0	0	0	0
DwellCyc Over 11	0	0	0	0	0	0
DwellCyc Over 12	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0
Yellow	0	0	0	0	0	0
Red	0	0	0	0	0	0
Return Max	0	0	0	0	0	0

## Preemption Adv Times[3.8]/Init Dwell [3.9]

Preempt	1	2	3	4	5	6
All Red B4 Preempt						
Reset Ext Dwell						
Reservice Preempt						
End Dwell						
DsblDwellCalls						
Enter Yellow Change	25.5	25.5	25.5	25.5	25.5	25.5
Enter Red Clear	25.5	25.5	25.5	25.5	25.5	25.5
Track Yellow Change	25.5	25.5	25.5	25.5	25.5	25.5
Track Red Clear	25.5	25.5	25.5	25.5	25.5	25.5
Dynamic Exit Threshold	0	0	0	0	0	0
Initial Dwell Phase 1	0	0	0	0	0	0
Initial Dwell Phase 2	0	0	0	0	0	0
Initial Dwell Phase 3	0	0	0	0	0	0
Initial Dwell Phase 4	0	0	0	0	0	0
Ped 1	0	0	0	0	0	0
Ped 2	0	0	0	0	0	0
Ped 3	0	0	0	0	0	0
Ped 4	0	0	0	0	0	0
Initial Dwell Overlap 1	0	0	0	0	0	0
Initial Dwell Overlap 2	0	0	0	0	0	0
Initial Dwell Overlap 3	0	0	0	0	0	0
Initial Dwell Overlap 4	0	0	0	0	0	0
Initial Dwell Overlap 5	0	0	0	0	0	0
Initial Dwell Overlap 6	0	0	0	0	0	0
Initial Dwell Overlap 7	0	0	0	0	0	0
Initial Dwell Overlap 8	0	0	0	0	0	0
Initial Dwell Overlap 9	0	0	0	0	0	0
Initial Dwell Overlap 10	0	0	0	0	0	0
Initial Dwell Overlap 11	0	0	0	0	0	0
Initial Dwell Overlap 12	0	0	0	0	0	0
Initial Dwell Overlap 13	0	0	0	0	0	0
Initial Dwell Overlap 14	0	0	0	0	0	0
Initial Dwell Overlap 15	0	0	0	0	0	0

Initial Dwell Overlap 16 0 0 0 0 0 0 0 0

Coordination, Modes, + [2.1]

## Modes

Modes+

<b>Operational</b>	<b>Correct</b>	<b>Maximum</b>	<b>Force-Off</b>
	SHRT/LNG	MAX INH	FLOAT

modes												
Mode	Leave Before	Leave After	Recycle	Stop In Walk	External	Auto Reset	Latch Sec Foff	Coord Easy Float	Yield Value	Coord NTCIP Link Sign	Closed Loop Active	
RESERVED	TIMED	TIMED	NO RECYLE	ON	OFF	ON	OFF	OFF	0	+	ON	OFF

## Coordination, Pattern 1-16 [2.4]

## Coordination, Pattern 17-32 [2.4]

## Coordination, Pattern+ 1-8 [2.5]

## Douglas County

## Timing Sheet

11/27/2024 10:57:35 AM

**Station : 68 - WR Pkwy & Mountain Maple ( Standard File )**

Coordination, Pattern+ 9-16 [2.5]

Coordination, Pattern+ 17 - 24 [2.5]

## Douglas County

## Timing Sheet

11/27/2024 10:57:35 AM

**Station : 68 - WR Pkwy & Mountain Maple ( Standard File )**

## Coordination, Splits [2.7.1]

## Douglas County

## Timing Sheet

11/27/2024 10:57:35 AM

**Station : 68 - WR Pkwy & Mountain Maple ( Standard File )**

Split Table 22	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON															
Group	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	

## Douglas County

## Timing Sheet

11/27/2024 10:57:35 AM

**Station : 68 - WR Pkwy & Mountain Maple ( Standard File )**

## Douglas County

## Timing Sheet

11/27/2024 10:57:35 AM

**Station : 68 - WR Pkwy & Mountain Maple ( Standard File )**

## TB Coor, Advanced Scheduler [4.3]

## TB Coor, Day Plan [4.4]

## Douglas County

## Timing Sheet

11/27/2024 10:57:35 AM

**Station : 68 - WR Pkwy & Mountain Maple ( Standard File )**

**Station : 68 - WR Pkwy & Mountain Maple ( Standard File )****TB Coor, Action Table [4.5]**

Action	Pattern	Aux 1	Aux 2	Aux 3	Special 1	Special 2	Special 3	Special 4	Special 5	Special 6	Special 7	Special 8
1	1				0	0						
2	2				0	0						
3	3				0	0						
4	4				0	0						
5	5				0	0						
6	6				0	0						
7	7				0	0						
8	8				0	0						
9	9				0	0						
10	10				0	0						
11	11				0	0						
12	12				0	0						
13	13				0	0						
14	14				0	0						
15	15				0	0						
16	16				0	0						
17	17				0	0						
18	18				0	0						
19	19				0	0						
20	20				0	0						
21	21				0	0						
22	22				0	0						
23	23				0	0						
24	24				0	0						
25	25				0	0						
26	26				0	0						
27	27				0	0						
28	28				0	0						
29	29				0	0						
30	30				0	0						
31	31				0	0						
32	32				0	0						
33					0	0						
34					0	0						
35					0	0						
36					0	0						
37					0	0						
38					0	0						
39					0	0						
40					0	0						
41					0	0						
42					0	0						
43					0	0						
44					0	0						
45					0	0						
46					0	0						
47					0	0						
48					0	0						
49					0	0						
50					0	0						
51					0	0						
52					0	0						
53					0	0						
54					0	0						
55					0	0						
56					0	0						
57					0	0						
58					0	0						
59					0	0						
60					0	0						
61					0	0						
62					0	0						
63					0	0						
64					0	0						
99	254				0	0						
100	255				0	0						

Douglas County

## Timing Sheet

11/27/2024 10:57:35 AM

**Station : 68 - WR Pkwy & Mountain Maple ( Standard File )**

Alternate Phase Program 1, Interval Times [1.1.6.1]

Alternate Phase Program 2, Interval Times [1.1.6.1]

Alternate Phase Program 1, >Phase Options [1.1.6.2]

Alternate Phase Program 2, Phase Options [1.1.6.2]

Alternate Phase Program 3, Phase Options [1.1.6.2]

Alternate Phase Program 1, Calls and Redirection

[1.1.6.3]

Alternate Phase Program 2, Calls and Redirection

### [1.1.6.3]

## Douglas County

## Timing Sheet

11/27/2024 10:57:35 AM

**Station : 68 - WR Pkwy & Mountain Maple ( Standard File )**

Detector Alternate Program 1, Vehicle Parameters [5.5.1]

Detector Alternate Program 2, Vehicle Parameters [5.5.1]

## User Input map [1.8.9.1]

## User Output map [1.8.9.2]

## Appendix D Existing Level of Service Reports

## Lanes, Volumes, Timings

## 30: Westridge Village Pkwy &amp; Highlands Ranch Pkwy

12/23/2024

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↓		↑	↑↓		↑	↑	↑	↑	↑↓	
Traffic Volume (vph)	3	743	108	98	451	36	123	5	197	82	5	7
Future Volume (vph)	3	743	108	98	451	36	123	5	197	82	5	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	100		100	50		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981			0.989				0.850		0.910	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3472	0	1770	3500	0	1770	1863	1583	1770	1695	0
Flt Permitted	0.395			0.147			0.748			0.752		
Satd. Flow (perm)	736	3472	0	274	3500	0	1393	1863	1583	1401	1695	0
Right Turn on Red		Yes				Yes			Yes		Yes	
Satd. Flow (RTOR)		25			13				310		9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		386			629			741			129	
Travel Time (s)		8.8			14.3			16.8			2.9	
Peak Hour Factor	0.79	0.79	0.79	0.84	0.84	0.84	0.55	0.55	0.55	0.81	0.81	0.81
Adj. Flow (vph)	4	941	137	117	537	43	224	9	358	101	6	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	1078	0	117	580	0	224	9	358	101	15	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60	60		60	60		60
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Minimum Split (s)	9.0	26.5		9.0	26.5		29.0	29.0	29.0	30.0	30.0	
Total Split (s)	15.0	40.0		15.0	40.0		25.0	25.0	25.0	25.0	25.0	
Total Split (%)	18.8%	50.0%		18.8%	50.0%		31.3%	31.3%	31.3%	31.3%	31.3%	
Maximum Green (s)	11.0	33.5		11.0	33.5		20.0	20.0	20.0	20.0	20.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.5		4.0	6.5		5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Walk Time (s)		5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		8.5			6.5		19.0	19.0	19.0	20.0	20.0	
Pedestrian Calls (#/hr)		0			0		0	0	0	0	0	
Act Effct Green (s)	47.0	33.5		47.0	33.5		20.0	20.0	20.0	20.0	20.0	
Actuated g/C Ratio	0.59	0.42		0.59	0.42		0.25	0.25	0.25	0.25	0.25	
v/c Ratio	0.01	0.73		0.32	0.39		0.64	0.02	0.57	0.29	0.03	

## Lanes, Volumes, Timings

30: Westridge Village Pkwy &amp; Highlands Ranch Pkwy

12/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	5.3	22.7		8.3	16.8		36.7	22.8	9.1	27.0	16.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	5.3	22.7		8.3	16.8		36.7	22.8	9.1	27.0	16.2	
LOS	A	C		A	B		D	C	A	C	B	
Approach Delay		22.6			15.4			19.8			25.6	
Approach LOS		C			B			B			C	
Queue Length 50th (ft)	1	225		20	100		100	3	19	41	2	
Queue Length 95th (ft)	3	244		36	129		95	9	1	74	15	
Internal Link Dist (ft)		306			549			661			49	
Turn Bay Length (ft)	100			100			100		100	50		
Base Capacity (vph)	574	1468		366	1473		348	465	628	350	430	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.01	0.73		0.32	0.39		0.64	0.02	0.57	0.29	0.03	

## Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 33.5 (42%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 70

Control Type: Pretimed

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 20.1

Intersection LOS: C

Intersection Capacity Utilization 55.8%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 30: Westridge Village Pkwy &amp; Highlands Ranch Pkwy



## Lanes, Volumes, Timings

36: Westridge Knolls Ave &amp; Highlands Ranch Pkwy

12/23/2024

	↑	→	↓	↗	↖	↙	↖	↗	↑	↗	↖	↓	↗
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↑	↑↓		↑	↑↓		↑	↑		↑	↑↓		
Traffic Volume (vph)	35	1198	80	23	566	16	49	8	75	21	35	28	
Future Volume (vph)	35	1198	80	23	566	16	49	8	75	21	35	28	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	130		0	150		0	150		0	100		0	
Storage Lanes	1		0	1		0	1		0	1		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.991			0.996			0.865			0.934		
Flt Protected	0.950			0.950			0.950			0.950			
Satd. Flow (prot)	1770	3507	0	1770	3525	0	1770	1611	0	1770	1740	0	
Flt Permitted	0.357			0.104			0.713			0.698			
Satd. Flow (perm)	665	3507	0	194	3525	0	1328	1611	0	1300	1740	0	
Right Turn on Red		Yes				Yes			Yes			Yes	
Satd. Flow (RTOR)	9			4			17			30			
Link Speed (mph)	45			45			30			30			
Link Distance (ft)	502			817			552			297			
Travel Time (s)	7.6			12.4			12.5			6.8			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	38	1302	87	25	615	17	53	9	82	23	38	30	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	38	1389	0	25	632	0	53	91	0	23	68	0	
Enter Blocked Intersection	No												
Lane Alignment	Left	Left	Right										
Median Width(ft)	12			12			12			12			
Link Offset(ft)	0			0			0			0			
Crosswalk Width(ft)	16			16			16			16			
Two way Left Turn Lane													
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	60		60	60		60	60		60	60	60	60	
Turn Type	Perm	NA											
Protected Phases	2			6			8			4			
Permitted Phases	2			6			8			4			
Minimum Split (s)	31.5	31.5		31.5	31.5		32.0	32.0		32.0	32.0		
Total Split (s)	45.0	45.0		45.0	45.0		45.0	45.0		45.0	45.0		
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		
Maximum Green (s)	38.5	38.5		38.5	38.5		40.0	40.0		40.0	40.0		
Yellow Time (s)	4.5	4.5		4.5	4.5		3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0		
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Total Lost Time (s)	6.5	6.5		6.5	6.5		5.0	5.0		5.0	5.0		
Lead/Lag													
Lead-Lag Optimize?													
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0		
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		22.0	22.0		22.0	22.0		
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0		
Act Effct Green (s)	38.5	38.5		38.5	38.5		40.0	40.0		40.0	40.0		
Actuated g/C Ratio	0.43	0.43		0.43	0.43		0.44	0.44		0.44	0.44		
v/c Ratio	0.13	0.92		0.30	0.42		0.09	0.13		0.04	0.09		

## Lanes, Volumes, Timings

36: Westridge Knolls Ave &amp; Highlands Ranch Pkwy

12/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	17.3	35.9		29.3	18.9		15.1	12.6		14.5	9.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	17.3	35.9		29.3	18.9		15.1	12.6		14.5	9.6	
LOS	B	D		C	B		B	B		B	A	
Approach Delay		35.4			19.3			13.5			10.8	
Approach LOS		D			B			B			B	
Queue Length 50th (ft)	13	380		9	127		17	24		7	12	
Queue Length 95th (ft)	34	#532		34	172		39	52		21	36	
Internal Link Dist (ft)		422			737			472			217	
Turn Bay Length (ft)	130			150			150			100		
Base Capacity (vph)	284	1505		82	1510		590	725		577	790	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.13	0.92		0.30	0.42		0.09	0.13		0.04	0.09	

## Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green

Natural Cycle: 70

Control Type: Pretimed

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 28.5

Intersection LOS: C

Intersection Capacity Utilization 54.6%

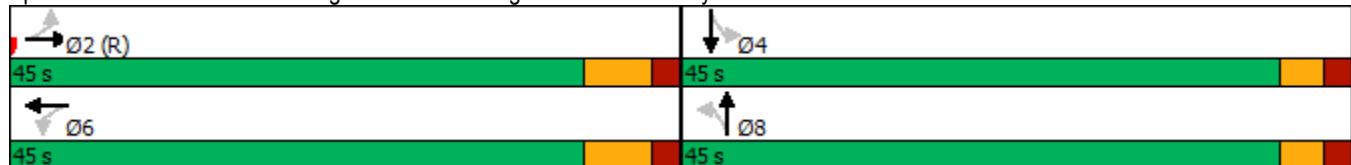
ICU Level of Service A

Analysis Period (min) 15

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 36: Westridge Knolls Ave &amp; Highlands Ranch Pkwy



## Lanes, Volumes, Timings

67: Springhill Pkwy &amp; Highlands Ranch Pkwy

12/23/2024

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑	↑↑	↑↑	↑	↑↑	↑	↑	↑	↑↑	
Traffic Volume (vph)	15	813	283	152	344	32	233	25	290	26	34	6
Future Volume (vph)	15	813	283	152	344	32	233	25	290	26	34	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		165	240		0	250		0	150		0
Storage Lanes	1		1	2		1	2		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	3433	1863	1583	1770	1822	0
Flt Permitted	0.532			0.104			0.550			0.734		
Satd. Flow (perm)	991	3539	1583	376	3539	1583	1988	1863	1583	1367	1822	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			197			155			412			6
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		705			1593			631			652	
Travel Time (s)		16.0			36.2			14.3			14.8	
Peak Hour Factor	0.87	0.87	0.87	0.93	0.93	0.93	0.70	0.70	0.70	0.45	0.45	0.45
Adj. Flow (vph)	17	934	325	163	370	34	333	36	414	58	76	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	17	934	325	163	370	34	333	36	414	58	89	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60	60		60	60	60	60
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Minimum Split (s)	10.0	30.5	30.5	10.0	31.5	31.5	10.0	38.5	38.5	10.0	24.5	
Total Split (s)	15.0	40.0	40.0	25.0	50.0	50.0	40.0	50.0	50.0	15.0	25.0	
Total Split (%)	11.5%	30.8%	30.8%	19.2%	38.5%	38.5%	30.8%	38.5%	38.5%	11.5%	19.2%	
Maximum Green (s)	10.0	33.5	33.5	20.0	43.5	43.5	35.0	43.5	43.5	10.0	18.5	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes											
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0			
Flash Dont Walk (s)		19.0	19.0		20.0	20.0		27.0	27.0			
Pedestrian Calls (#/hr)		0	0		0	0		0	0			
Act Effct Green (s)	45.0	33.5	33.5	60.0	43.5	43.5	60.0	43.5	43.5	30.0	18.5	
Actuated g/C Ratio	0.35	0.26	0.26	0.46	0.33	0.33	0.46	0.33	0.33	0.23	0.14	
v/c Ratio	0.04	1.03	0.59	0.25	0.31	0.05	0.25	0.06	0.52	0.17	0.34	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	20.3	83.6	20.8	20.8	33.1	0.2	21.5	29.8	5.4	24.4	50.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.3	83.6	20.8	20.8	33.1	0.2	21.5	29.8	5.4	24.4	50.8	
LOS	C	F	C	C	C	A	C	C	A	C	C	D
Approach Delay					27.6			13.4				40.4
Approach LOS		E				C		B				D
Queue Length 50th (ft)	8	~440	91	39	121	0	84	21	1	27	64	
Queue Length 95th (ft)	21	#541	178	60	164	0	87	36	1	26	54	
Internal Link Dist (ft)		625			1513			551			572	
Turn Bay Length (ft)	140		165	240			250			150		
Base Capacity (vph)	402	911	554	643	1184	632	1306	623	803	346	264	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	1.03	0.59	0.25	0.31	0.05	0.25	0.06	0.52	0.17	0.34	

**Intersection Summary**

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 42.3

Intersection LOS: D

Intersection Capacity Utilization 59.6%

ICU Level of Service B

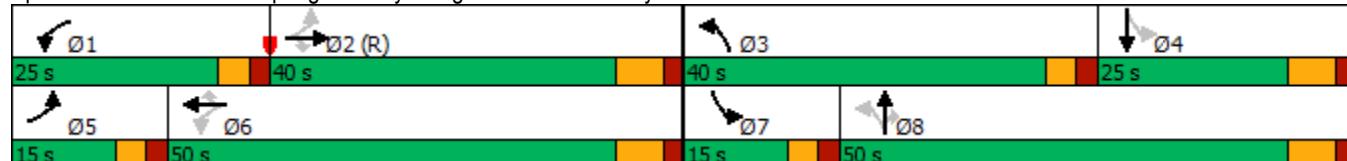
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

**Splits and Phases:** 67: Springhill Pkwy & Highlands Ranch Pkwy

## Lanes, Volumes, Timings

70: Foothills Canyon Blvd &amp; Highlands Ranch Pkwy

12/23/2024

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↓		↑	↑↓	↑	↑	↑	↑	↑	↑↓	
Traffic Volume (vph)	77	1112	23	60	479	87	45	37	107	109	21	92
Future Volume (vph)	77	1112	23	60	479	87	45	37	107	109	21	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	135		0	170		120	170		170	100		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997				0.850			0.850		0.878	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3529	0	1770	3539	1583	1770	1863	1583	1770	1635	0
Flt Permitted	0.448			0.104			0.666			0.682		
Satd. Flow (perm)	835	3529	0	194	3539	1583	1241	1863	1583	1270	1635	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				92			146		114	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1593			794			600			737	
Travel Time (s)		36.2			18.0			13.6			16.8	
Peak Hour Factor	0.87	0.87	0.87	0.95	0.95	0.95	0.32	0.32	0.32	0.81	0.81	0.81
Adj. Flow (vph)	89	1278	26	63	504	92	141	116	334	135	26	114
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	1304	0	63	504	92	141	116	334	135	140	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60	60		60	60		60
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6		6	8		8	4		
Minimum Split (s)	10.0	31.5		10.0	31.5	31.5	34.0	34.0	34.0	33.0	33.0	
Total Split (s)	10.0	45.0		10.0	45.0	45.0	30.0	30.0	30.0	30.0	30.0	
Total Split (%)	11.8%	52.9%		11.8%	52.9%	52.9%	35.3%	35.3%	35.3%	35.3%	35.3%	
Maximum Green (s)	5.0	38.5		5.0	38.5	38.5	25.0	25.0	25.0	25.0	25.0	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	6.5		5.0	6.5	6.5	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Walk Time (s)		5.0			5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		10.5			10.5	10.5	24.0	24.0	24.0	23.0	23.0	
Pedestrian Calls (#/hr)		0			0	0	0	0	0	0	0	
Act Effct Green (s)	45.0	38.5		45.0	38.5	38.5	25.0	25.0	25.0	25.0	25.0	
Actuated g/C Ratio	0.53	0.45		0.53	0.45	0.45	0.29	0.29	0.29	0.29	0.29	
v/c Ratio	0.18	0.81		0.32	0.31	0.12	0.39	0.21	0.59	0.36	0.25	

## Lanes, Volumes, Timings

70: Foothills Canyon Blvd &amp; Highlands Ranch Pkwy

12/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	8.7	25.3		12.3	15.5	3.6	27.8	23.9	18.9	27.2	8.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	8.7	25.3		12.3	15.5	3.6	27.8	23.9	18.9	27.2	8.1	
LOS	A	C		B	B	A	C	C	B	C	A	
Approach Delay		24.2			13.5			22.0			17.4	
Approach LOS		C			B			C			B	
Queue Length 50th (ft)	19	305		13	86	0	60	46	82	57	10	
Queue Length 95th (ft)	37	372		29	122	25	35	29	9	94	41	
Internal Link Dist (ft)		1513			714			520			657	
Turn Bay Length (ft)	135			170		120	170		170	100		
Base Capacity (vph)	497	1600		195	1602	767	365	547	568	373	561	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.18	0.81		0.32	0.31	0.12	0.39	0.21	0.59	0.36	0.25	

## Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 85

Offset: 38.5 (45%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 80

Control Type: Pretimed

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 20.7

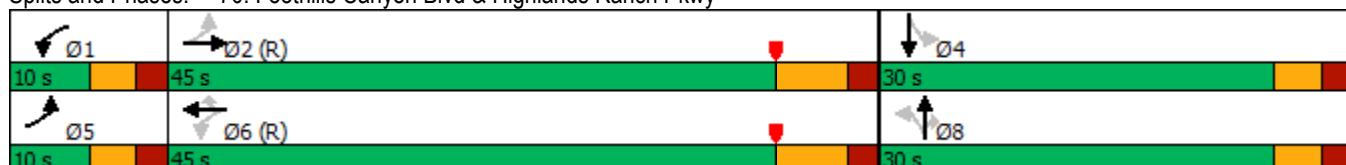
Intersection LOS: C

Intersection Capacity Utilization 62.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 70: Foothills Canyon Blvd &amp; Highlands Ranch Pkwy



## Lanes, Volumes, Timings

## 75: Wildcat Reserve Pkwy &amp; Mountain Maple

12/23/2024

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓		↑	↑	↑	↑	↑↑	↑	↑	↑↑	
Traffic Volume (vph)	58	69	16	77	13	215	75	706	176	188	380	64
Future Volume (vph)	58	69	16	77	13	215	75	706	176	188	380	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140			120		90	200		330	635		0
Storage Lanes	1			0	1		1	1		1	1	0
Taper Length (ft)	25				25			25			25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.972				0.850			0.850		0.978	
Flt Protected	0.950				0.950			0.950			0.950	
Satd. Flow (prot)	1770	1811	0	1770	1863	1583	1770	3539	1583	1770	3461	0
Flt Permitted	0.745				0.577			0.450			0.107	
Satd. Flow (perm)	1388	1811	0	1075	1863	1583	838	3539	1583	199	3461	0
Right Turn on Red			Yes				Yes			Yes		Yes
Satd. Flow (RTOR)		11				321				259		24
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		148			238			915			292	
Travel Time (s)		3.4			5.4			20.8			6.6	
Peak Hour Factor	0.48	0.48	0.48	0.67	0.67	0.67	0.68	0.68	0.68	0.82	0.82	0.82
Adj. Flow (vph)	121	144	33	115	19	321	110	1038	259	229	463	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	121	177	0	115	19	321	110	1038	259	229	541	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60	60		60	60		60
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Minimum Split (s)	34.0	34.0		31.0	31.0	31.0	9.5	31.5	31.5	9.5	31.5	
Total Split (s)	35.0	35.0		35.0	35.0	35.0	15.0	40.0	40.0	30.0	55.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%	33.3%	14.3%	38.1%	38.1%	28.6%	52.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0	30.0	11.0	33.5	33.5	26.0	48.5	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	4.5	4.5	3.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	4.0	6.5	6.5	4.0	6.5	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Walk Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0		5.0	
Flash Dont Walk (s)	24.0	24.0		21.0	21.0	21.0		16.5	16.5		10.5	
Pedestrian Calls (#/hr)	0	0		0	0	0		0	0		0	
Act Effct Green (s)	30.0	30.0		30.0	30.0	30.0	47.0	33.5	33.5	66.0	48.5	
Actuated g/C Ratio	0.29	0.29		0.29	0.29	0.29	0.45	0.32	0.32	0.63	0.46	
v/c Ratio	0.31	0.34		0.37	0.04	0.47	0.23	0.92	0.38	0.45	0.34	

## Lanes, Volumes, Timings

75: Wildcat Reserve Pkwy &amp; Mountain Maple

12/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	32.0	29.9		34.4	27.5	5.8	11.1	48.4	5.1	17.0	17.8	
Queue Delay	0.0	0.0		1.6	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.0	29.9		36.0	27.5	7.1	11.1	48.4	5.1	17.0	17.8	
LOS	C	C		D	C	A	B	D	A	B	B	
Approach Delay		30.8			15.3			37.5			17.6	
Approach LOS		C			B			D			B	
Queue Length 50th (ft)	64	88		62	9	0	27	351	0	70	112	
Queue Length 95th (ft)	57	70		81	20	5	36	296	11	122	135	
Internal Link Dist (ft)		68			158			835			212	
Turn Bay Length (ft)	140			120		90	200		330	635		
Base Capacity (vph)	396	525		307	532	681	472	1129	681	514	1611	
Starvation Cap Reductn	0	0		88	0	190	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.34		0.53	0.04	0.65	0.23	0.92	0.38	0.45	0.34	

## Intersection Summary

Area Type: Other

Cycle Length: 105

Actuated Cycle Length: 105

Offset: 45 (43%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Pretimed

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 28.1

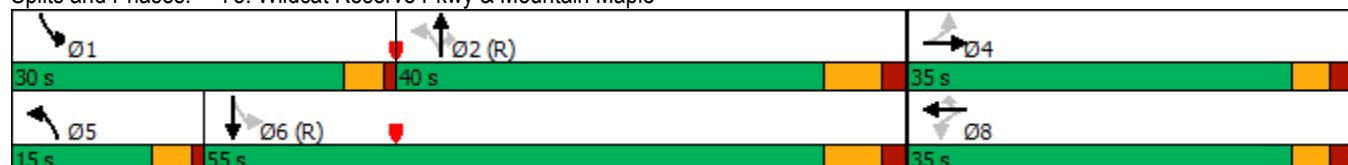
Intersection LOS: C

Intersection Capacity Utilization 55.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 75: Wildcat Reserve Pkwy &amp; Mountain Maple



## Lanes, Volumes, Timings

## 30: Westridge Village Pkwy &amp; Highlands Ranch Pkwy

12/23/2024

	→	→	→	←	←	↑	↑	↓	↓	←	→	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑		↑	↑↑		↑	↑	↑	↑	↑↑	
Traffic Volume (vph)	7	637	122	185	841	78	90	3	175	69	5	5
Future Volume (vph)	7	637	122	185	841	78	90	3	175	69	5	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	100		100	50	0	0
Storage Lanes	1		0	1		0	1		1	1	0	0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.976			0.987				0.850		0.925	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3454	0	1770	3493	0	1770	1863	1583	1770	1723	0
Flt Permitted	0.169			0.234			0.747			0.754		
Satd. Flow (perm)	315	3454	0	436	3493	0	1391	1863	1583	1405	1723	0
Right Turn on Red		Yes				Yes			Yes		Yes	
Satd. Flow (RTOR)		34			15				302		8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		386			629			741			129	
Travel Time (s)		8.8			14.3			16.8			2.9	
Peak Hour Factor	0.87	0.87	0.87	0.90	0.90	0.90	0.58	0.58	0.58	0.66	0.66	0.66
Adj. Flow (vph)	8	732	140	206	934	87	155	5	302	105	8	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	872	0	206	1021	0	155	5	302	105	16	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60	60		60	60		60
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Minimum Split (s)	9.5	26.5		9.5	26.5		29.0	29.0	29.0	30.0	30.0	
Total Split (s)	15.0	40.0		15.0	40.0		25.0	25.0	25.0	25.0	25.0	
Total Split (%)	18.8%	50.0%		18.8%	50.0%		31.3%	31.3%	31.3%	31.3%	31.3%	
Maximum Green (s)	11.0	33.5		11.0	33.5		20.0	20.0	20.0	20.0	20.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.5		4.0	6.5		5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Walk Time (s)		5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		8.5			6.5		19.0	19.0	19.0	20.0	20.0	
Pedestrian Calls (#/hr)		0			0		0	0	0	0	0	
Act Effct Green (s)	47.0	33.5		47.0	33.5		20.0	20.0	20.0	20.0	20.0	
Actuated g/C Ratio	0.59	0.42		0.59	0.42		0.25	0.25	0.25	0.25	0.25	
v/c Ratio	0.02	0.59		0.47	0.69		0.45	0.01	0.49	0.30	0.04	

## Lanes, Volumes, Timings

30: Westridge Village Pkwy &amp; Highlands Ranch Pkwy

12/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	5.6	19.3		9.9	21.8		30.2	22.7	6.2	27.2	17.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	5.6	19.3		9.9	21.8		30.2	22.7	6.2	27.2	17.0	
LOS	A	B		A	C		C	C	A	C	B	
Approach Delay		19.2			19.8			14.4			25.8	
Approach LOS		B			B			B			C	
Queue Length 50th (ft)	1	164		37	210		66	2	0	43	3	
Queue Length 95th (ft)	6	212		64	279		72	6	0	60	12	
Internal Link Dist (ft)		306			549			661			49	
Turn Bay Length (ft)	100			100			100		100		50	
Base Capacity (vph)	385	1466		439	1471		347	465	622	351	436	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.02	0.59		0.47	0.69		0.45	0.01	0.49	0.30	0.04	

## Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 33.5 (42%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 70

Control Type: Pretimed

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 19.0

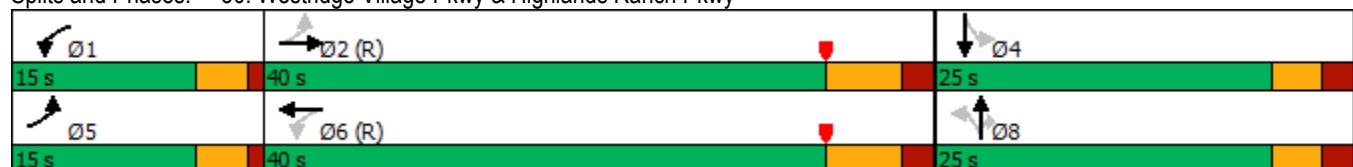
Intersection LOS: B

Intersection Capacity Utilization 56.3%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 30: Westridge Village Pkwy &amp; Highlands Ranch Pkwy



## Lanes, Volumes, Timings

36: Westridge Knolls Ave &amp; Highlands Ranch Pkwy

12/23/2024

	↑	→	↓	↗	↖	↙	↖	↗	↑	↗	↖	↓	↗
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↑	↑↓		↑	↑↓		↑	↑		↑	↑↓		
Traffic Volume (vph)	65	1134	88	67	1043	40	72	34	58	29	33	37	
Future Volume (vph)	65	1134	88	67	1043	40	72	34	58	29	33	37	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	130		0	150		0	150		0	100		0	
Storage Lanes	1		0	1		0	1		0	1		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.989			0.995			0.905			0.921		
Flt Protected	0.950			0.950			0.950			0.950			
Satd. Flow (prot)	1770	3500	0	1770	3522	0	1770	1686	0	1770	1716	0	
Flt Permitted	0.112			0.104			0.708			0.692			
Satd. Flow (perm)	209	3500	0	194	3522	0	1319	1686	0	1289	1716	0	
Right Turn on Red		Yes				Yes			Yes			Yes	
Satd. Flow (RTOR)		11			5			22			30		
Link Speed (mph)		45			45			30			30		
Link Distance (ft)		502			817			552			297		
Travel Time (s)		7.6			12.4			12.5			6.8		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	71	1233	96	73	1134	43	78	37	63	32	36	40	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	71	1329	0	73	1177	0	78	100	0	32	76	0	
Enter Blocked Intersection	No												
Lane Alignment	Left	Left	Right										
Median Width(ft)		12			12			12			12		
Link Offset(ft)		0			0			0			0		
Crosswalk Width(ft)		16			16			16			16		
Two way Left Turn Lane													
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	60		60	60		60	60		60	60	60	60	
Turn Type	Perm	NA											
Protected Phases		2			6			8			4		
Permitted Phases	2			6			8			4			
Minimum Split (s)	31.5	31.5		31.5	31.5		24.0	24.0		24.0	24.0		
Total Split (s)	45.0	45.0		45.0	45.0		45.0	45.0		45.0	45.0		
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		
Maximum Green (s)	38.5	38.5		38.5	38.5		39.0	39.0		39.0	39.0		
Yellow Time (s)	4.5	4.5		4.5	4.5		3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0		
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0		
Lead/Lag													
Lead-Lag Optimize?													
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0		
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0		
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0		
Act Effct Green (s)	38.5	38.5		38.5	38.5		39.0	39.0		39.0	39.0		
Actuated g/C Ratio	0.43	0.43		0.43	0.43		0.43	0.43		0.43	0.43		
v/c Ratio	0.80	0.88		0.89	0.78		0.14	0.13		0.06	0.10		

## Lanes, Volumes, Timings

36: Westridge Knolls Ave &amp; Highlands Ranch Pkwy

12/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	80.9	32.2		104.0	26.5		16.3	12.6		15.3	10.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	80.9	32.2		104.0	26.5		16.3	12.6		15.3	10.5	
LOS	F	C		F	C		B	B		B	B	
Approach Delay		34.6				31.0			14.2			11.9
Approach LOS		C				C			B			B
Queue Length 50th (ft)	34	352		37	292		26	26		10	15	
Queue Length 95th (ft)	#118	#472		#125	375		54	56		27	40	
Internal Link Dist (ft)		422				737			472			217
Turn Bay Length (ft)	130			150			150			100		
Base Capacity (vph)	89	1503		82	1509		571	743		558	760	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.80	0.88		0.89	0.78		0.14	0.13		0.06	0.10	

## Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 31.0

Intersection LOS: C

Intersection Capacity Utilization 76.8%

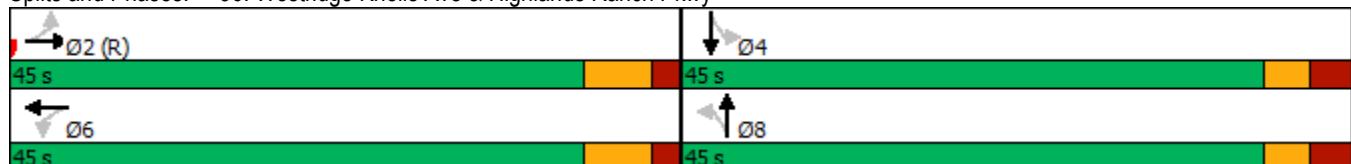
ICU Level of Service D

Analysis Period (min) 15

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 36: Westridge Knolls Ave &amp; Highlands Ranch Pkwy



## Lanes, Volumes, Timings

67: Springhill Pkwy &amp; Highlands Ranch Pkwy

12/23/2024

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑	↑↑	↑↑	↑	↑↑	↑	↑	↑	↑↑	
Traffic Volume (vph)	15	599	258	232	667	50	399	53	346	46	41	29
Future Volume (vph)	15	599	258	232	667	50	399	53	346	46	41	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		165	240		0	250		0	150		0
Storage Lanes	1		1	2		1	2		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.938	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	3433	1863	1583	1770	1747	0
Flt Permitted	0.282			0.191			0.498			0.714		
Satd. Flow (perm)	525	3539	1583	690	3539	1583	1800	1863	1583	1330	1747	0
Right Turn on Red		Yes			Yes		Yes		Yes		Yes	
Satd. Flow (RTOR)		232			155				413		23	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		705			1593			631			652	
Travel Time (s)		16.0			36.2			14.3			14.8	
Peak Hour Factor	0.94	0.94	0.94	0.89	0.89	0.89	0.80	0.80	0.80	0.59	0.59	0.59
Adj. Flow (vph)	16	637	274	261	749	56	499	66	433	78	69	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	16	637	274	261	749	56	499	66	433	78	118	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60	60		60	60		60
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Minimum Split (s)	10.0	30.5	30.5	10.0	31.5	31.5	10.0	38.5	38.5	10.0	24.5	
Total Split (s)	15.0	40.0	40.0	25.0	50.0	50.0	40.0	50.0	50.0	15.0	25.0	
Total Split (%)	11.5%	30.8%	30.8%	19.2%	38.5%	38.5%	30.8%	38.5%	38.5%	11.5%	19.2%	
Maximum Green (s)	10.0	33.5	33.5	20.0	43.5	43.5	35.0	43.5	43.5	10.0	18.5	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes											
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0			
Flash Dont Walk (s)		19.0	19.0		20.0	20.0		27.0	27.0			
Pedestrian Calls (#/hr)		0	0		0	0		0	0			
Act Effct Green (s)	45.0	33.5	33.5	60.0	43.5	43.5	60.0	43.5	43.5	30.0	18.5	
Actuated g/C Ratio	0.35	0.26	0.26	0.46	0.33	0.33	0.46	0.33	0.33	0.23	0.14	
v/c Ratio	0.06	0.70	0.47	0.35	0.63	0.09	0.39	0.11	0.54	0.23	0.44	

## Lanes, Volumes, Timings

67: Springhill Pkwy &amp; Highlands Ranch Pkwy

12/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	20.5	48.5	10.9	21.9	39.4	0.3	23.1	30.5	6.4	25.3	46.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.5	48.5	10.9	21.9	39.4	0.3	23.1	30.5	6.4	25.3	46.6	
LOS	C	D	B	C	D	A	C	C	A	C	C	D
Approach Delay									16.4			38.1
Approach LOS							C		B			D
Queue Length 50th (ft)	7	256	27	64	279	0	134	38	11	36	74	
Queue Length 95th (ft)	21	325	105	91	343	0	151	65	45	43	80	
Internal Link Dist (ft)						1513			551			572
Turn Bay Length (ft)	140			165	240			250				150
Base Capacity (vph)	277	911	580	740	1184	632	1270	623	804	340	268	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.70	0.47	0.35	0.63	0.09	0.39	0.11	0.54	0.23	0.44	

## Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 13 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 29.3

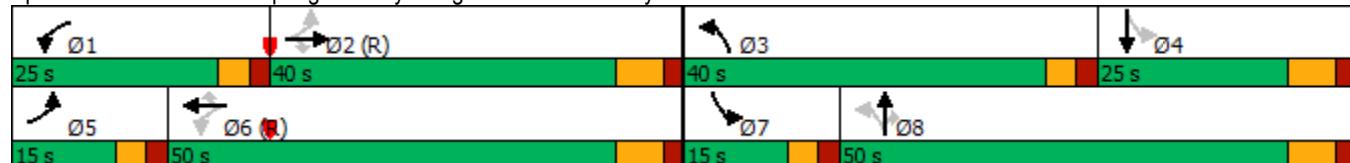
Intersection LOS: C

Intersection Capacity Utilization 57.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 67: Springhill Pkwy &amp; Highlands Ranch Pkwy



## Lanes, Volumes, Timings

70: Foothills Canyon Blvd &amp; Highlands Ranch Pkwy

12/23/2024

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↓		↑	↑↓	↑	↑	↑	↑	↑	↑↓	
Traffic Volume (vph)	138	1009	12	49	956	124	51	73	186	86	7	102
Future Volume (vph)	138	1009	12	49	956	124	51	73	186	86	7	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	135		0	170		120	170		170	100		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998				0.850			0.850		0.860	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3532	0	1770	3539	1583	1770	1863	1583	1770	1602	0
Flt Permitted	0.177			0.164			0.669			0.666		
Satd. Flow (perm)	330	3532	0	305	3539	1583	1246	1863	1583	1241	1602	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				111			167		128	
Link Speed (mph)	30			30			30			30		
Link Distance (ft)	1593			794			600			737		
Travel Time (s)	36.2			18.0			13.6			16.8		
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.52	0.52	0.52	0.80	0.80	0.80
Adj. Flow (vph)	145	1062	13	53	1039	135	98	140	358	108	9	128
Shared Lane Traffic (%)												
Lane Group Flow (vph)	145	1075	0	53	1039	135	98	140	358	108	137	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)	24			24			12			12		
Link Offset(ft)	0			0			0			0		
Crosswalk Width(ft)	16			16			16			16		
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60	60		60	60		60
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6		6	8		8	4		
Minimum Split (s)	10.0	31.5		10.0	31.5	31.5	34.0	34.0	34.0	33.0	33.0	
Total Split (s)	10.0	45.0		10.0	45.0	45.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	11.8%	52.9%		11.8%	52.9%	52.9%	35.3%	35.3%	35.3%	35.3%	35.3%	35.3%
Maximum Green (s)	5.0	38.5		5.0	38.5	38.5	25.0	25.0	25.0	25.0	25.0	25.0
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.5		5.0	6.5	6.5	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Walk Time (s)		5.0			5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		10.5			10.5	10.5	24.0	24.0	24.0	23.0	23.0	23.0
Pedestrian Calls (#/hr)		0			0	0	0	0	0	0	0	0
Act Effct Green (s)	45.0	38.5		45.0	38.5	38.5	25.0	25.0	25.0	25.0	25.0	25.0
Actuated g/C Ratio	0.53	0.45		0.53	0.45	0.45	0.29	0.29	0.29	0.29	0.29	0.29
v/c Ratio	0.56	0.67		0.21	0.65	0.17	0.27	0.26	0.61	0.30	0.24	

## Lanes, Volumes, Timings

70: Foothills Canyon Blvd &amp; Highlands Ranch Pkwy

12/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	17.2	20.8		9.7	20.4	4.7	25.5	24.5	18.6	26.0	6.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	17.2	20.8		9.7	20.4	4.7	25.5	24.5	18.6	26.0	6.4	
LOS	B	C		A	C	A	C	C	B	C	A	
Approach Delay		20.4				18.2			21.1			15.0
Approach LOS		C				B			C			B
Queue Length 50th (ft)	32	228		11	217	7	40	57	84	44	3	
Queue Length 95th (ft)	58	297		26	284	37	43	56	51	76	32	
Internal Link Dist (ft)		1513				714			520			657
Turn Bay Length (ft)	135			170		120	170		170	100		
Base Capacity (vph)	259	1600		247	1602	777	366	547	583	365	561	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.56	0.67		0.21	0.65	0.17	0.27	0.26	0.61	0.30	0.24	

## Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 85

Offset: 13 (15%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 80

Control Type: Pretimed

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 19.3

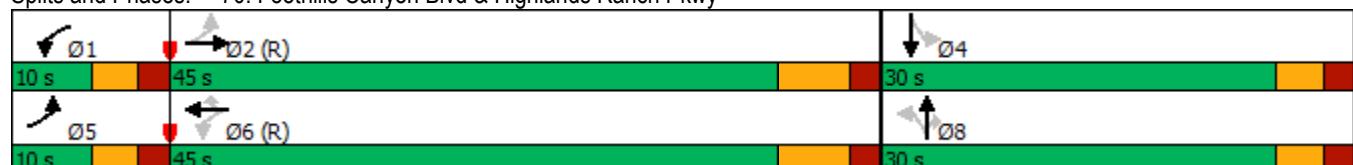
Intersection LOS: B

Intersection Capacity Utilization 59.3%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 70: Foothills Canyon Blvd &amp; Highlands Ranch Pkwy



## Lanes, Volumes, Timings

## 75: Wildcat Reserve Pkwy &amp; Mountain Maple

12/23/2024

	→	→	→	←	←	↑	↑	↓	↓	←	→	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑		↑	↑	↑	↑	↑↑	↑	↑	↑↑	
Traffic Volume (vph)	37	1	19	110	8	184	49	494	60	75	472	36
Future Volume (vph)	37	1	19	110	8	184	49	494	60	75	472	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140			120		90	200		330	635		0
Storage Lanes	1			0	1		1	1		1	1	0
Taper Length (ft)	25				25			25			25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.857				0.850			0.850		0.989	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1596	0	1770	1863	1583	1770	3539	1583	1770	3500	0
Flt Permitted	0.749			0.730			0.420			0.219		
Satd. Flow (perm)	1395	1596	0	1360	1863	1583	782	3539	1583	408	3500	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39				302			104			10
Link Speed (mph)		30			30			30				30
Link Distance (ft)		148			238			915				292
Travel Time (s)		3.4			5.4			20.8				6.6
Peak Hour Factor	0.49	0.49	0.49	0.61	0.61	0.61	0.70	0.70	0.70	0.83	0.83	0.83
Adj. Flow (vph)	76	2	39	180	13	302	70	706	86	90	569	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	41	0	180	13	302	70	706	86	90	612	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60	60		60	60		60
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1		6
Permitted Phases	4			8		8	2		2		6	
Minimum Split (s)	34.0	34.0		31.0	31.0	31.0	9.5	31.5	31.5	9.5		31.5
Total Split (s)	35.0	35.0		35.0	35.0	35.0	15.0	40.0	40.0	30.0		55.0
Total Split (%)	33.3%	33.3%		33.3%	33.3%	33.3%	14.3%	38.1%	38.1%	28.6%		52.4%
Maximum Green (s)	30.0	30.0		30.0	30.0	30.0	11.0	33.5	33.5	26.0		48.5
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	4.5	4.5	3.0		4.5
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	1.0	2.0	2.0	1.0		2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	4.0	6.5	6.5	4.0		6.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Walk Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0			5.0
Flash Dont Walk (s)	24.0	24.0		21.0	21.0	21.0		16.5	16.5			10.5
Pedestrian Calls (#/hr)	0	0		0	0	0		0	0			0
Act Effct Green (s)	30.0	30.0		30.0	30.0	30.0	47.0	33.5	33.5	66.0		48.5
Actuated g/C Ratio	0.29	0.29		0.29	0.29	0.29	0.45	0.32	0.32	0.63		0.46
v/c Ratio	0.19	0.08		0.46	0.02	0.45	0.15	0.63	0.15	0.15		0.38



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	30.0	9.9		35.6	27.2	5.8	10.3	33.4	4.2	8.3	18.9	
Queue Delay	0.0	0.0		5.9	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.0	9.9		41.5	27.2	7.0	10.3	33.4	4.2	8.3	18.9	
LOS	C	A		D	C	A	B	C	A	A	A	B
Approach Delay		23.0				20.1			28.6			17.6
Approach LOS		C				C			C			B
Queue Length 50th (ft)	39	1		99	6	0	17	211	0	22	134	
Queue Length 95th (ft)	40	5		105	14	0	26	198	9	38	160	
Internal Link Dist (ft)		68			158			835			212	
Turn Bay Length (ft)	140			120		90	200		330	635		
Base Capacity (vph)	398	483		388	532	668	453	1129	575	593	1622	
Starvation Cap Reductn	0	0		153	0	193	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.08		0.77	0.02	0.64	0.15	0.63	0.15	0.15	0.38	

**Intersection Summary**

Area Type: Other

Cycle Length: 105

Actuated Cycle Length: 105

Offset: 45 (43%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Pretimed

Maximum v/c Ratio: 0.63

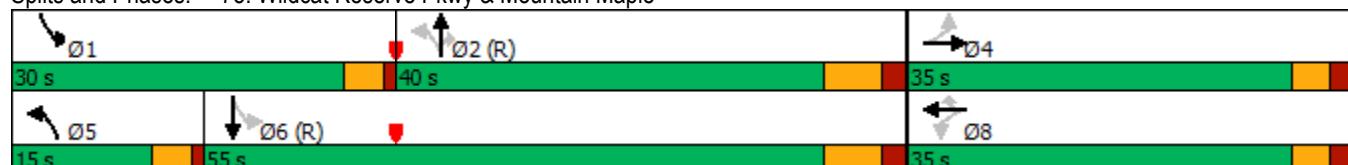
Intersection Signal Delay: 22.8

Intersection LOS: C

Intersection Capacity Utilization 50.7%

ICU Level of Service A

Analysis Period (min) 15

**Splits and Phases:** 75: Wildcat Reserve Pkwy & Mountain Maple

**Intersection**

Int Delay, s/veh 21.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
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Lane Configurations				
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Traffic Vol, veh/h	0	226	728	251	0	529
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Future Vol, veh/h	0	226	728	251	0	529
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Conflicting Peds, #/hr	0	0	0	0	0	0
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Sign Control	Stop	Stop	Free	Free	Free	Free
--------------	------	------	------	------	------	------

RT Channelized	-	None	-	None	-	None
----------------	---	------	---	------	---	------

Storage Length	-	0	-	180	-	-
----------------	---	---	---	-----	---	---

Veh in Median Storage, #	0	-	0	-	-	0
--------------------------	---	---	---	---	---	---

Grade, %	0	-	0	-	-	0
----------	---	---	---	---	---	---

Peak Hour Factor	43	43	64	64	76	76
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Heavy Vehicles, %	2	2	2	2	2	2
-------------------	---	---	---	---	---	---

Mvmt Flow	0	526	1138	392	0	696
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Major/Minor	Minor1	Major1	Major2
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Conflicting Flow All	-	569	0	0	-	-
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Stage 1	-	-	-	-	-	-
---------	---	---	---	---	---	---

Stage 2	-	-	-	-	-	-
---------	---	---	---	---	---	---

Critical Hdwy	-	6.94	-	-	-	-
---------------	---	------	---	---	---	---

Critical Hdwy Stg 1	-	-	-	-	-	-
---------------------	---	---	---	---	---	---

Critical Hdwy Stg 2	-	-	-	-	-	-
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Follow-up Hdwy	-	3.32	-	-	-	-
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Pot Cap-1 Maneuver	0	~ 465	-	-	0	-
--------------------	---	-------	---	---	---	---

Stage 1	0	-	-	-	0	-
---------	---	---	---	---	---	---

Stage 2	0	-	-	-	0	-
---------	---	---	---	---	---	---

Platoon blocked, %	-	-	-	-	-	-
--------------------	---	---	---	---	---	---

Mov Cap-1 Maneuver	-	~ 465	-	-	-	-
--------------------	---	-------	---	---	---	---

Mov Cap-2 Maneuver	-	-	-	-	-	-
--------------------	---	---	---	---	---	---

Stage 1	-	-	-	-	-	-
---------	---	---	---	---	---	---

Stage 2	-	-	-	-	-	-
---------	---	---	---	---	---	---

Approach	WB	NB	SB
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HCM Control Delay, s	111.3	0	0
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HCM LOS	F		
---------	---	--	--

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
-----------------------	-----	----------	-----

Capacity (veh/h)	-	-	465
------------------	---	---	-----

HCM Lane V/C Ratio	-	-	1.13
--------------------	---	---	------

HCM Control Delay (s)	-	-	111.3
-----------------------	---	---	-------

HCM Lane LOS	-	-	F
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HCM 95th %tile Q(veh)	-	-	18.3
-----------------------	---	---	------

**Notes**

~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

## Intersection

Int Delay, s/veh 0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↖ ↗		↖ ↗		↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗
Traffic Vol, veh/h	11	431	9	0	296	6	0	0	0	2	0	15
Future Vol, veh/h	11	431	9	0	296	6	0	0	0	2	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	0	-	-	-	-	-	-	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	63	63	62	62	62	25	25	25	53	53	53
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	684	14	0	477	10	0	0	0	4	0	28

Major/Minor	Major1	Major2			Minor1			Minor2				
Conflicting Flow All	487	0	0	-	-	0	1221	1212	691	1207	-	482
Stage 1	-	-	-	-	-	-	725	725	-	482	-	-
Stage 2	-	-	-	-	-	-	496	487	-	725	-	-
Critical Hdwy	4.12	-	-	-	-	-	7.12	6.52	6.22	7.12	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	-	-
Follow-up Hdwy	2.218	-	-	-	-	-	3.518	4.018	3.318	3.518	-	3.318
Pot Cap-1 Maneuver	1076	-	-	0	-	-	157	182	445	160	0	584
Stage 1	-	-	-	0	-	-	416	430	-	565	0	-
Stage 2	-	-	-	0	-	-	556	550	-	416	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1076	-	-	-	-	-	148	179	445	158	-	584
Mov Cap-2 Maneuver	-	-	-	-	-	-	148	179	-	158	-	-
Stage 1	-	-	-	-	-	-	409	423	-	556	-	-
Stage 2	-	-	-	-	-	-	529	550	-	409	-	-

Approach	EB	WB			NB			SB				
HCM Control Delay, s	0.2	0			0			13.5				
HCM LOS					A			B				
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2			
Capacity (veh/h)	-	1076	-	-	-	-	-	158	584			
HCM Lane V/C Ratio	-	0.016	-	-	-	-	-	0.024	0.048			
HCM Control Delay (s)	0	8.4	-	-	-	-	-	28.3	11.5			
HCM Lane LOS	A	A	-	-	-	-	-	D	B			
HCM 95th %tile Q(veh)	-	0	-	-	-	-	-	0.1	0.2			

**Intersection**

Int Delay, s/veh 1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
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Lane Configurations	↑	↑↑	↑	↑↑		
Traffic Vol, veh/h	0	99	514	54	0	641
Future Vol, veh/h	0	99	514	54	0	641
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	180	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	41	41	72	72	76	76
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	241	714	75	0	843

Major/Minor	Minor1	Major1	Major2
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Conflicting Flow All	-	357	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	639	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	639	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
----------	----	----	----

HCM Control Delay, s	14	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
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Capacity (veh/h)	-	-	639	-
HCM Lane V/C Ratio	-	-	0.378	-
HCM Control Delay (s)	-	-	14	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	1.8	-

## Intersection

Int Delay, s/veh 2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↗			↔		↖		↗
Traffic Vol, veh/h	2	19	111	0	242	8	0	0	0	9	0	57
Future Vol, veh/h	2	19	111	0	242	8	0	0	0	9	0	57
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	0	-	-	-	-	-	-	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	58	58	58	25	25	25	52	52	52
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	22	131	0	417	14	0	0	0	17	0	110

Major/Minor	Major1	Major2			Minor1			Minor2				
Conflicting Flow All	431	0	0	-	-	0	571	523	88	516	-	424
Stage 1	-	-	-	-	-	-	92	92	-	424	-	-
Stage 2	-	-	-	-	-	-	479	431	-	92	-	-
Critical Hdwy	4.12	-	-	-	-	-	7.12	6.52	6.22	7.12	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	-	-
Follow-up Hdwy	2.218	-	-	-	-	-	3.518	4.018	3.318	3.518	-	3.318
Pot Cap-1 Maneuver	1129	-	-	0	-	-	432	459	970	470	0	630
Stage 1	-	-	-	0	-	-	915	819	-	608	0	-
Stage 2	-	-	-	0	-	-	568	583	-	915	0	-
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	1129	-	-	-	-	-	356	458	970	470	-	630
Mov Cap-2 Maneuver	-	-	-	-	-	-	356	458	-	470	-	-
Stage 1	-	-	-	-	-	-	913	817	-	607	-	-
Stage 2	-	-	-	-	-	-	469	583	-	913	-	-

Approach	EB	WB			NB			SB			
HCM Control Delay, s	0.1	0			0			12.1			
HCM LOS					A			B			

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	1129	-	-	-	-	470	630
HCM Lane V/C Ratio	-	0.002	-	-	-	-	0.037	0.174
HCM Control Delay (s)	0	8.2	-	-	-	-	13	11.9
HCM Lane LOS	A	A	-	-	-	-	B	B
HCM 95th %tile Q(veh)	-	0	-	-	-	-	0.1	0.6

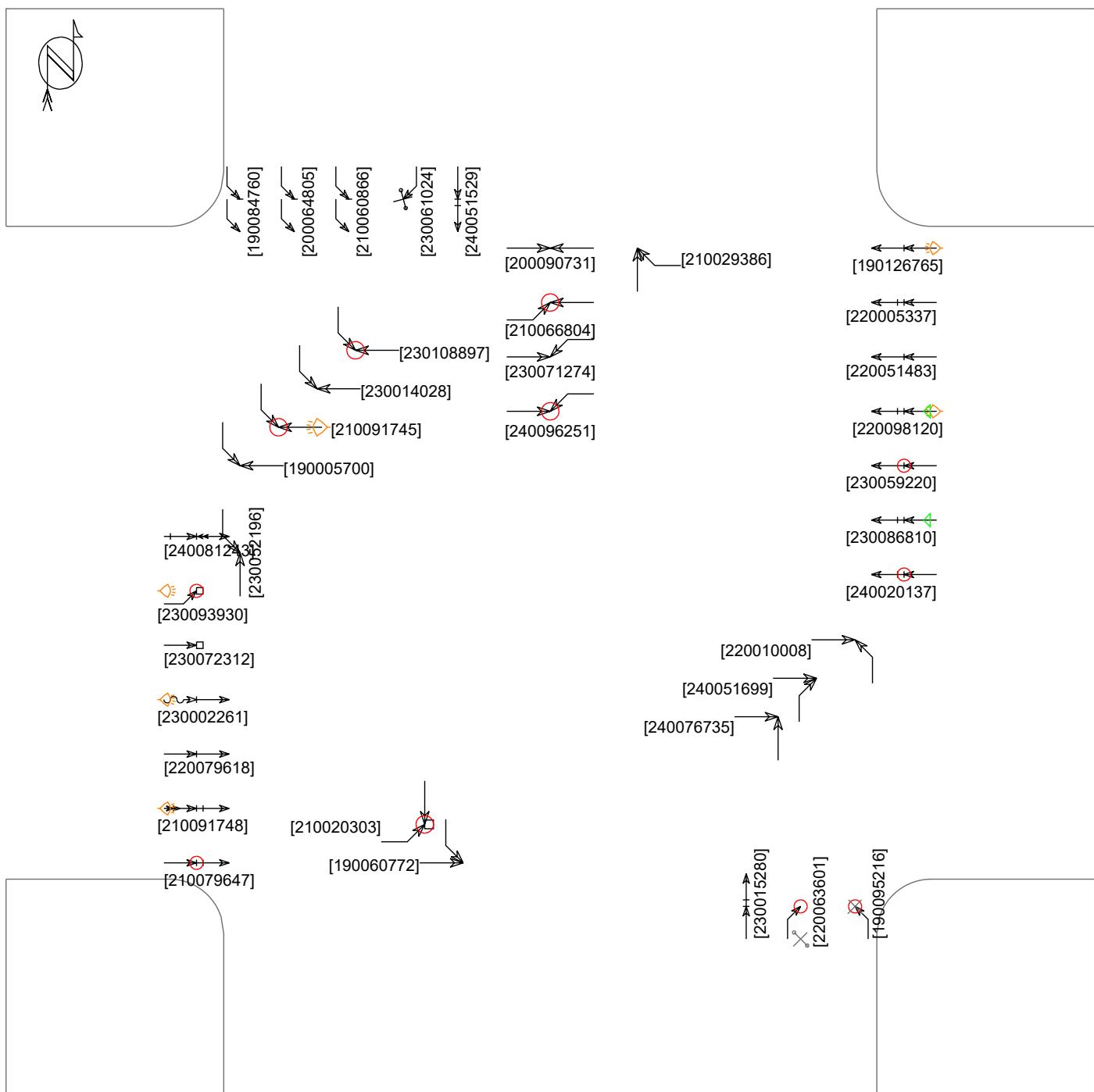
## Appendix E Crash Diagrams and Listings

# HIGHLANDS RANCH PKWY & FOOTHILLS CANYON BLVD

2019 - 2024

37 Crashes

Clear



↙ Straight  
 ↙+ Stopped  
 ↙ Unknown  
 ↙→ Backing  
 ↙→ Overtaking  
 ↙→ Sideswipe

□ Parked  
 ↙~ Weaving  
 ↙~ Changing Ln  
 ↗ Right turn  
 ↗ Left turn  
 ↗ U-turn

✕ Pedestrian  
 ✖ Bicycle  
 ○ Injury  
 ● Fatality  
 ⚡ Nighttime  
 ✤ DUI

< 3rd Vehicle  
 ↙ M Motorcycle  
 ↙○ Overtake  
 Fixed objects:  
 □ General  
 ✕ Animal  
 □ Public Obj  
 ✕ Private Obj

Crash Magic Online 11/14/2024

# HIGHLANDS RANCH PKWY & FOOTHILLS CANYON BLVD

2019 - 2024

37 Crashes

Clear

Casetrackingid	Accidenttime	Accidentdate	Primarystreet	Crossstreet	Onroadaddress	Numberinjured	Numberkilled	Harmfulevent1
190005700	11:10 am	1/14/2019	FOOTHILLS CANYON BLVD	HIGHLANDS RANCH PKWY		0	0	Front to Side
190060772	7:18 am	5/24/2019	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Side
190084760	11:23 am	7/24/2019	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
190095216	3:47 pm	8/21/2019	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		1	0	Pedestrian
190126765	5:23 pm	11/11/2019	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
200064805	3:55 pm	7/8/2020	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
200090731	2:56 pm	10/4/2020	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Side
210020303	4:29 pm	3/11/2021	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		1	0	Curb
210029386	2:25 pm	4/13/2021	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Side
210060866	4:03 pm	7/27/2021	FOOTHILLS CANYON BLVD	HIGHLANDS RANCH PKWY		0	0	Front to Rear
210066804	5:20 pm	8/17/2021	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Front
210079647	3:06 pm	10/1/2021	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
210091745	5:39 pm	11/15/2021	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Side
210091748	5:37 pm	11/15/2021	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
220005337	1:39 pm	1/22/2022	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
220010008	3:12 pm	2/8/2022	FOOTHILLS CANYON BLVD	HIGHLANDS RANCH PKWY		0	0	Front to Side
220051483	5:30 pm	6/29/2022	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
220063601	7:47 am	8/11/2022	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		1	0	Bicycle / Motorized Bicycle
220079618	3:04 pm	10/5/2022	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
220098120	6:08 pm	12/14/2022	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
230002261	5:43 pm	1/10/2023	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
230014028	11:47 am	2/20/2023	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Side
230015280	2:07 pm	2/24/2023	FOOTHILLS CANYON BLVD	HIGHLANDS RANCH PKWY		0	0	Front to Rear
230052196	11:35 am	6/19/2023	FOOTHILLS CANYON BLVD	HIGHLANDS RANCH PKWY		0	0	Front to Front
230059220	5:28 pm	7/10/2023	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		1	0	Front to Rear
230061024	10:31 am	7/16/2023	FOOTHILLS CANYON BLVD	HIGHLANDS RANCH PKWY		0	0	Bicycle / Motorized Bicycle
230071274	7:34 am	8/17/2023	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Side

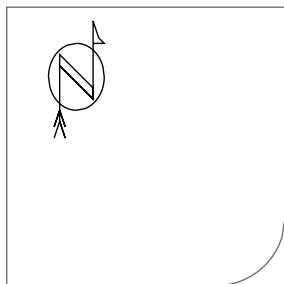
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230072312	4:42 pm	8/20/2023	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD	-2000	0	0	Curb
230086810	3:58 pm	10/6/2023	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
230093930	8:01 pm	10/31/2023	FOOTHILLS CANYON BLVD	HIGHLANDS RANCH PKWY		2	0	Curb
230108897	3:20 pm	12/21/2023	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		1	0	Front to Side
240020137	6:13 pm	2/28/2024	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
240051529	11:06 am	6/3/2024	FOOTHILLS CANYON BLVD	HIGHLANDS RANCH PKWY		0	0	Front to Rear
240051699	4:40 pm	6/3/2024	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Side
240076735	6:19 pm	8/15/2024	FOOTHILLS CANYON BLVD	HIGHLANDS RANCH PKWY		0	0	Front to Side
240081243	1:46 pm	8/29/2024	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
240096251	10:54 am	10/17/2024	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Side

# WILDCAT RESERVE PKWY & KINGFISHER AVE

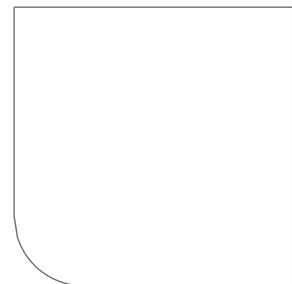
2019 - 2024

3 Crashes

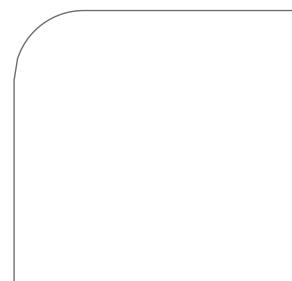
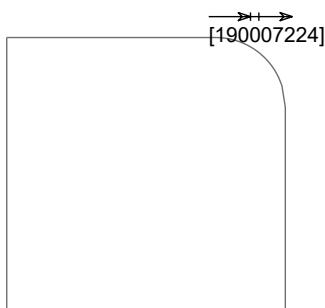
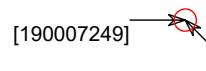
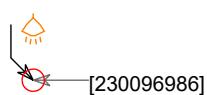
Clear



Kingfisher



Wildcat Reserve



- ← Straight
- ←+ Stopped
- ← Unknown
- ↔ Backing
- ↔ Overtaking
- ↔ Sideswipe

- Parked
- ↔ Weaving
- ↔ Changing Ln
- ↗ Right turn
- ↘ Left turn
- ↗ U-turn

- ✗ Pedestrian
- ✗ Bicycle
- Injury
- Fatality
- ⚠ Nighttime
- ⚡ DUI

- ⬧ 3rd Vehicle
- ⬧ M- Motorcycle
- ⬧ Overtur
- Fixed objects:
- General
- Public Obj
- ☒ Animal
- ☒ Private Obj

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# WILDCAT RESERVE PKWY & KINGFISHER AVE

2019 - 2024

3 Crashes

Clear

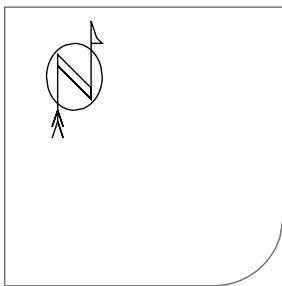
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190007249	3:09 pm	1/17/2019	STONE MOUNTAIN DR	WILDCAT RESERVE PKWY		2	0	Front to Side
230096986	5:54 pm	11/10/2023	KINGFISHER AVE	WILDCAT RESERVE PKWY		3	0	Front to Side

# WILDCAT RESERVE PKWY & MOUNTAIN MAPLE LN

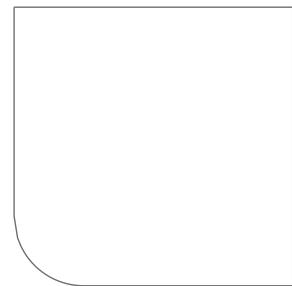
2019 - 2024

4 Crashes

Clear



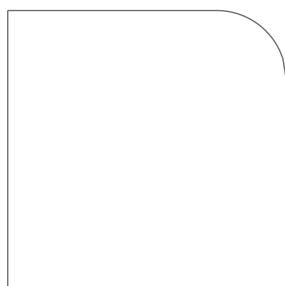
Wildcat Reserve



Mountain Maple



[230082400]



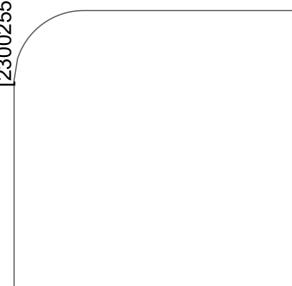
[230079552]



[230025918]



[230025512]



- ← Straight
- ↔ Stopped
- ↑ Unknown
- ↔ Backing
- ↔ Overtaking
- ↔ Sideswipe

- Parked
- ↔ Weaving
- ↔ Changing Ln
- ↗ Right turn
- ↖ Left turn
- ↘ U-turn

- ✗ Pedestrian
- ✖ Bicycle
- Injury
- Fatality
- ⚠ Nighttime
- ⚡ DUI

- ⬧ 3rd Vehicle
- ↔\_M\_ Motorcycle
- ↔\_O\_ Overturn
- Fixed objects:
  - General
  - Public Obj
  - ☒ Animal
  - ☒ Private Obj

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# WILDCAT RESERVE PKWY & MOUNTAIN MAPLE LN

2019 - 2024

4 Crashes

Clear

Casetrackingid	Accidenttime	Accidentdate	Primarystreet	Crossstreet	Onroadaddress	Numberinjured	Numberkilled	Harmfulevent1
230025512	7:44 am	3/27/2023	MOUNTAIN MAPLE LN	WILDCAT RESERVE PKWY		0	0	Rear to Side
230025918	7:46 am	3/27/2023	MOUNTAIN MAPLE LN	WILDCAT RESERVE PKWY		0	0	Front to Side
230079552	7:29 am	9/13/2023	WILDCAT RESERVE PKWY	MOUNTAIN MAPLE LN		0	0	Front to Rear
230082400	9:49 am	9/23/2023	WILDCAT RESERVE PKWY	MOUNTAIN MAPLE LN		0	0	Front to Side

## Appendix F Projected Level of Service Reports

## Lanes, Volumes, Timings

## 30: Westridge Village Pkwy &amp; Highlands Ranch Pkwy

12/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↓		↑	↑↓		↑	↑	↑	↑	↑↓	
Traffic Volume (vph)	3	763	108	108	471	40	123	5	207	85	5	7
Future Volume (vph)	3	763	108	108	471	40	123	5	207	85	5	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	100		100	50		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981			0.988				0.850		0.910	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3472	0	1770	3497	0	1770	1863	1583	1770	1695	0
Flt Permitted	0.376			0.138			0.748			0.752		
Satd. Flow (perm)	700	3472	0	257	3497	0	1393	1863	1583	1401	1695	0
Right Turn on Red		Yes				Yes			Yes		Yes	
Satd. Flow (RTOR)	24			14				307			9	
Link Speed (mph)	30			30			30			30		
Link Distance (ft)	386			629			741			129		
Travel Time (s)	8.8			14.3			16.8			2.9		
Peak Hour Factor	0.79	0.79	0.79	0.84	0.84	0.84	0.55	0.55	0.55	0.81	0.81	0.81
Adj. Flow (vph)	4	966	137	129	561	48	224	9	376	105	6	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	1103	0	129	609	0	224	9	376	105	15	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)	12			12			12			12		
Link Offset(ft)	0			0			0			0		
Crosswalk Width(ft)	16			16			16			16		
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60	60		60	60		60
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Minimum Split (s)	9.0	26.5		9.0	26.5		29.0	29.0	29.0	30.0	30.0	
Total Split (s)	15.0	40.0		15.0	40.0		25.0	25.0	25.0	25.0	25.0	
Total Split (%)	18.8%	50.0%		18.8%	50.0%		31.3%	31.3%	31.3%	31.3%	31.3%	
Maximum Green (s)	11.0	33.5		11.0	33.5		20.0	20.0	20.0	20.0	20.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.5		4.0	6.5		5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Walk Time (s)	5.0			5.0			5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	8.5			6.5			19.0	19.0	19.0	20.0	20.0	
Pedestrian Calls (#/hr)	0			0			0	0	0	0	0	
Act Effct Green (s)	47.0	33.5		47.0	33.5		20.0	20.0	20.0	20.0	20.0	
Actuated g/C Ratio	0.59	0.42		0.59	0.42		0.25	0.25	0.25	0.25	0.25	
v/c Ratio	0.01	0.75		0.36	0.41		0.64	0.02	0.60	0.30	0.03	

## Lanes, Volumes, Timings

30: Westridge Village Pkwy &amp; Highlands Ranch Pkwy

12/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	5.3	23.2		9.0	17.0		36.7	22.8	10.4	27.2	16.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	5.3	23.2		9.0	17.0		36.7	22.8	10.4	27.2	16.2	
LOS	A	C		A	B		D	C	B	C	B	
Approach Delay		23.2			15.6			20.3			25.8	
Approach LOS		C			B			C			C	
Queue Length 50th (ft)	1	233		22	106		100	3	27	43	2	
Queue Length 95th (ft)	3	252		39	135		95	9	7	76	15	
Internal Link Dist (ft)		306			549			661			49	
Turn Bay Length (ft)	100			100			100		100		50	
Base Capacity (vph)	558	1467		359	1472		348	465	626	350	430	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.01	0.75		0.36	0.41		0.64	0.02	0.60	0.30	0.03	

## Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 33.5 (42%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 70

Control Type: Pretimed

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 20.4

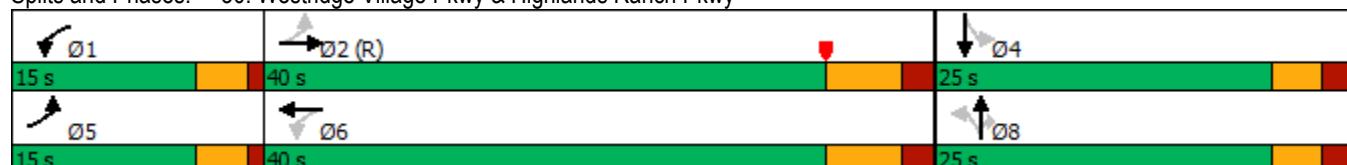
Intersection LOS: C

Intersection Capacity Utilization 56.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 30: Westridge Village Pkwy &amp; Highlands Ranch Pkwy



## Lanes, Volumes, Timings

36: Westridge Knolls Ave &amp; Highlands Ranch Pkwy

12/23/2024

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↓		↑	↑↓		↑	↑		↑	↑	
Traffic Volume (vph)	41	1209	78	21	577	16	52	8	70	21	31	34
Future Volume (vph)	41	1209	78	21	577	16	52	8	70	21	31	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		0	150		0	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.996			0.866			0.922	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3507	0	1770	3525	0	1770	1613	0	1770	1717	0
Flt Permitted	0.350			0.104			0.711			0.702		
Satd. Flow (perm)	652	3507	0	194	3525	0	1324	1613	0	1308	1717	0
Right Turn on Red		Yes				Yes			Yes		Yes	
Satd. Flow (RTOR)	9			4			16			37		
Link Speed (mph)	45			45			30			30		
Link Distance (ft)	502			817			552			297		
Travel Time (s)	7.6			12.4			12.5			6.8		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	45	1314	85	23	627	17	57	9	76	23	34	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	1399	0	23	644	0	57	85	0	23	71	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)	12			12			12			12		
Link Offset(ft)	0			0			0			0		
Crosswalk Width(ft)	16			16			16			16		
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60	60		60	60		60
Turn Type	Perm	NA										
Protected Phases	2			6			8			4		
Permitted Phases	2			6			8			4		
Minimum Split (s)	31.5	31.5		31.5	31.5		32.0	32.0		32.0	32.0	
Total Split (s)	45.0	45.0		45.0	45.0		45.0	45.0		45.0	45.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	38.5	38.5		38.5	38.5		40.0	40.0		40.0	40.0	
Yellow Time (s)	4.5	4.5		4.5	4.5		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	38.5	38.5		38.5	38.5		40.0	40.0		40.0	40.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43		0.44	0.44		0.44	0.44	
v/c Ratio	0.16	0.93		0.28	0.43		0.10	0.12		0.04	0.09	

## Lanes, Volumes, Timings

36: Westridge Knolls Ave &amp; Highlands Ranch Pkwy

12/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	17.8	36.8		27.8	19.0		15.2	12.6		14.5	8.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	17.8	36.8		27.8	19.0		15.2	12.6		14.5	8.6	
LOS	B	D		C	B		B	B		B	A	
Approach Delay		36.2			19.3			13.6			10.0	
Approach LOS		D			B			B			B	
Queue Length 50th (ft)	15	384		8	130		18	22		7	11	
Queue Length 95th (ft)	39	#538		32	175		41	49		21	35	
Internal Link Dist (ft)		422			737			472			217	
Turn Bay Length (ft)	130			150			150			100		
Base Capacity (vph)	278	1505		82	1510		588	725		581	783	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.16	0.93		0.28	0.43		0.10	0.12		0.04	0.09	

## Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green

Natural Cycle: 70

Control Type: Pretimed

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 29.0

Intersection LOS: C

Intersection Capacity Utilization 55.0%

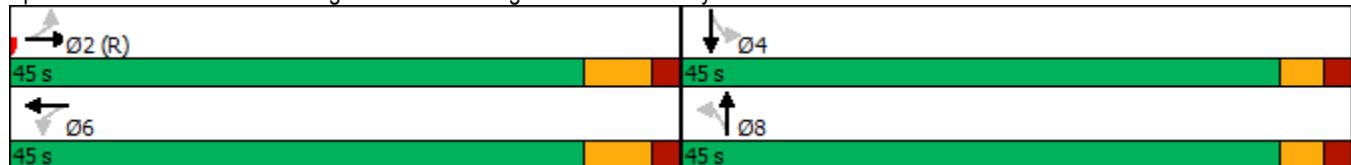
ICU Level of Service B

Analysis Period (min) 15

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 36: Westridge Knolls Ave &amp; Highlands Ranch Pkwy



## Lanes, Volumes, Timings

67: Springhill Pkwy &amp; Highlands Ranch Pkwy

12/23/2024

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑	↑↑	↑↑	↑	↑↑	↑	↑	↑	↑↑	
Traffic Volume (vph)	14	813	317	181	344	30	267	31	316	23	39	5
Future Volume (vph)	14	813	317	181	344	30	267	31	316	23	39	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		165	240		0	250		0	150		0
Storage Lanes	1		1	2		1	2		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	3433	1863	1583	1770	1831	0
Flt Permitted	0.532			0.104			0.546			0.728		
Satd. Flow (perm)	991	3539	1583	376	3539	1583	1973	1863	1583	1356	1831	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			210			155			417			4
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		705			1593			631			652	
Travel Time (s)		16.0			36.2			14.3			14.8	
Peak Hour Factor	0.87	0.87	0.87	0.93	0.93	0.93	0.70	0.70	0.70	0.45	0.45	0.45
Adj. Flow (vph)	16	934	364	195	370	32	381	44	451	51	87	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	16	934	364	195	370	32	381	44	451	51	98	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60	60		60	60		60
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Minimum Split (s)	10.0	30.5	30.5	10.0	31.5	31.5	10.0	38.5	38.5	10.0	24.5	
Total Split (s)	15.0	40.0	40.0	25.0	50.0	50.0	40.0	50.0	50.0	15.0	25.0	
Total Split (%)	11.5%	30.8%	30.8%	19.2%	38.5%	38.5%	30.8%	38.5%	38.5%	11.5%	19.2%	
Maximum Green (s)	10.0	33.5	33.5	20.0	43.5	43.5	35.0	43.5	43.5	10.0	18.5	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes											
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0			
Flash Dont Walk (s)		19.0	19.0		20.0	20.0		27.0	27.0			
Pedestrian Calls (#/hr)		0	0		0	0		0	0			
Act Effct Green (s)	45.0	33.5	33.5	60.0	43.5	43.5	60.0	43.5	43.5	30.0	18.5	
Actuated g/C Ratio	0.35	0.26	0.26	0.46	0.33	0.33	0.46	0.33	0.33	0.23	0.14	
v/c Ratio	0.04	1.03	0.65	0.30	0.31	0.05	0.29	0.07	0.56	0.15	0.37	

## Lanes, Volumes, Timings

## 67: Springhill Pkwy &amp; Highlands Ranch Pkwy

12/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	20.3	83.6	23.5	21.3	33.1	0.2	21.9	30.0	7.2	24.2	53.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	20.3	83.6	23.5	21.3	33.1	0.2	21.9	30.0	7.2	24.2	53.0	
LOS	C	F	C	C	C	A	C	C	A	C	C	D
Approach Delay						27.5			14.7			43.1
Approach LOS			E			C			B			D
Queue Length 50th (ft)	7	~440	114	47	121	0	98	25	19	23	73	
Queue Length 95th (ft)	20	#541	209	71	164	0	99	41	16	23	61	
Internal Link Dist (ft)			625			1513			551			572
Turn Bay Length (ft)	140		165	240			250			150		
Base Capacity (vph)	402	911	563	643	1184	632	1303	623	807	344	263	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	1.03	0.65	0.30	0.31	0.05	0.29	0.07	0.56	0.15	0.37	

## Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 41.8

Intersection LOS: D

Intersection Capacity Utilization 61.2%

ICU Level of Service B

Analysis Period (min) 15

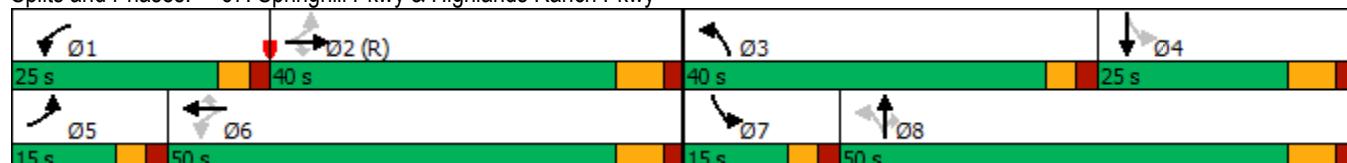
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

## Splits and Phases: 67: Springhill Pkwy &amp; Highlands Ranch Pkwy



## Lanes, Volumes, Timings

70: Foothills Canyon Blvd &amp; Highlands Ranch Pkwy

12/23/2024

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑		↑	↑↑	↑	↑	↑	↑	↑	↑↑	
Traffic Volume (vph)	83	1130	23	58	500	87	45	37	103	109	21	98
Future Volume (vph)	83	1130	23	58	500	87	45	37	103	109	21	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	135		0	170		120	170		170	100		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997				0.850			0.850		0.877	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3529	0	1770	3539	1583	1770	1863	1583	1770	1634	0
Flt Permitted	0.434			0.104			0.655			0.682		
Satd. Flow (perm)	808	3529	0	194	3539	1583	1220	1863	1583	1270	1634	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				92			145		121	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1593			794			600			737	
Travel Time (s)		36.2			18.0			13.6			16.8	
Peak Hour Factor	0.87	0.87	0.87	0.95	0.95	0.95	0.32	0.32	0.32	0.81	0.81	0.81
Adj. Flow (vph)	95	1299	26	61	526	92	141	116	322	135	26	121
Shared Lane Traffic (%)												
Lane Group Flow (vph)	95	1325	0	61	526	92	141	116	322	135	147	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60	60		60	60		60
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6		6	8		8	4		
Minimum Split (s)	10.0	31.5		10.0	31.5	31.5	34.0	34.0	34.0	33.0	33.0	
Total Split (s)	10.0	45.0		10.0	45.0	45.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	11.8%	52.9%		11.8%	52.9%	52.9%	35.3%	35.3%	35.3%	35.3%	35.3%	35.3%
Maximum Green (s)	5.0	38.5		5.0	38.5	38.5	25.0	25.0	25.0	25.0	25.0	25.0
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.5		5.0	6.5	6.5	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Walk Time (s)		5.0			5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		10.5			10.5	10.5	24.0	24.0	24.0	23.0	23.0	23.0
Pedestrian Calls (#/hr)		0			0	0	0	0	0	0	0	0
Act Effct Green (s)	45.0	38.5		45.0	38.5	38.5	25.0	25.0	25.0	25.0	25.0	25.0
Actuated g/C Ratio	0.53	0.45		0.53	0.45	0.45	0.29	0.29	0.29	0.29	0.29	0.29
v/c Ratio	0.20	0.83		0.31	0.33	0.12	0.39	0.21	0.57	0.36	0.26	

## Lanes, Volumes, Timings

70: Foothills Canyon Blvd &amp; Highlands Ranch Pkwy

12/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	8.8	25.9		12.1	15.7	3.6	28.0	23.9	18.1	27.2	7.9	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	8.8	25.9		12.1	15.7	3.6	28.0	23.9	18.1	27.2	7.9	
LOS	A	C		B	B	A	C	C	B	C	A	
Approach Delay		24.8			13.7			21.7			17.1	
Approach LOS		C			B			C			B	
Queue Length 50th (ft)	20	313		13	91	0	60	46	76	57	10	
Queue Length 95th (ft)	39	381		28	128	25	35	29	7	94	41	
Internal Link Dist (ft)		1513			714			520			657	
Turn Bay Length (ft)	135			170		120	170		170	100		
Base Capacity (vph)	484	1600		195	1602	767	358	547	567	373	566	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.20	0.83		0.31	0.33	0.12	0.39	0.21	0.57	0.36	0.26	

## Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 85

Offset: 38.5 (45%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 80

Control Type: Pretimed

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 20.9

Intersection LOS: C

Intersection Capacity Utilization 62.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 70: Foothills Canyon Blvd &amp; Highlands Ranch Pkwy



## Lanes, Volumes, Timings

## 75: Wildcat Reserve Pkwy &amp; Mountain Maple

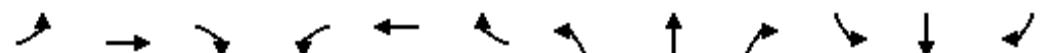
12/23/2024

	→	→	→	←	←	↑	↑	↓	↓	←	→	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Traffic Volume (vph)	58	77	16	109	21	287	133	709	208	260	380	64
Future Volume (vph)	58	77	16	109	21	287	133	709	208	260	380	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140			120		90	200		330	635		0
Storage Lanes	1			1		1	1		1	1		0
Taper Length (ft)	25			25		25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.974				0.850			0.850		0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1814	0	1770	1863	1583	1770	3539	1583	1770	3461	0
Flt Permitted	0.737			0.551			0.450			0.107		
Satd. Flow (perm)	1373	1814	0	1026	1863	1583	838	3539	1583	199	3461	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10				428			306		24	
Link Speed (mph)	30			30			30			30		
Link Distance (ft)	148			238			915			292		
Travel Time (s)	3.4			5.4			20.8			6.6		
Peak Hour Factor	0.48	0.48	0.48	0.67	0.67	0.67	0.68	0.68	0.68	0.82	0.82	0.82
Adj. Flow (vph)	121	160	33	163	31	428	196	1043	306	317	463	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	121	193	0	163	31	428	196	1043	306	317	541	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)	0			0			0			0		
Crosswalk Width(ft)	16			16			16			16		
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60	60		60	60		60
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Minimum Split (s)	34.0	34.0		31.0	31.0	31.0	9.5	31.5	31.5	9.5	31.5	
Total Split (s)	35.0	35.0		35.0	35.0	35.0	15.0	40.0	40.0	30.0	55.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%	33.3%	14.3%	38.1%	38.1%	28.6%	52.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0	30.0	11.0	33.5	33.5	26.0	48.5	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	4.5	4.5	3.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	4.0	6.5	6.5	4.0	6.5	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Walk Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0		5.0	
Flash Dont Walk (s)	24.0	24.0		21.0	21.0	21.0		16.5	16.5		10.5	
Pedestrian Calls (#/hr)	0	0		0	0	0		0	0		0	
Act Effct Green (s)	30.0	30.0		30.0	30.0	30.0	47.0	33.5	33.5	66.0	48.5	
Actuated g/C Ratio	0.29	0.29		0.29	0.29	0.29	0.45	0.32	0.32	0.63	0.46	
v/c Ratio	0.31	0.37		0.56	0.06	0.56	0.42	0.92	0.43	0.62	0.34	

## Lanes, Volumes, Timings

75: Wildcat Reserve Pkwy &amp; Mountain Maple

12/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	32.1	30.8		40.4	27.8	6.1	13.3	48.9	5.1	25.0	17.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.1	30.8		40.4	27.8	6.1	13.3	48.9	5.1	25.0	17.8	
LOS	C	C		D	C	A	B	D	A	C	B	
Approach Delay		31.3			16.2			35.7			20.5	
Approach LOS		C			B			D			C	
Queue Length 50th (ft)	64	98		93	15	0	51	354	0	128	112	
Queue Length 95th (ft)	57	77		113	28	0	59	297	7	191	135	
Internal Link Dist (ft)		68			158			835			212	
Turn Bay Length (ft)	140			120		90	200		330	635		
Base Capacity (vph)	392	525		293	532	758	472	1129	713	514	1611	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.37		0.56	0.06	0.56	0.42	0.92	0.43	0.62	0.34	

## Intersection Summary

Area Type: Other

Cycle Length: 105

Actuated Cycle Length: 105

Offset: 45 (43%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 27.8

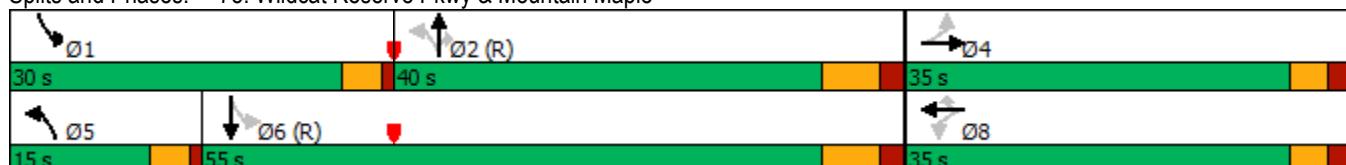
Intersection LOS: C

Intersection Capacity Utilization 60.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 75: Wildcat Reserve Pkwy &amp; Mountain Maple



## Lanes, Volumes, Timings

## 30: Westridge Village Pkwy &amp; Highlands Ranch Pkwy

12/23/2024

	→	→	→	←	←	↑	↑	↓	↓	←	→	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑		↑	↑↑		↑	↑	↑	↑	↑↑	
Traffic Volume (vph)	7	657	122	194	860	81	90	3	184	73	5	5
Future Volume (vph)	7	657	122	194	860	81	90	3	184	73	5	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	100		100	50	0	0
Storage Lanes	1		0	1		0	1		1	1	0	0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977			0.987				0.850		0.925	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3458	0	1770	3493	0	1770	1863	1583	1770	1723	0
Flt Permitted	0.159			0.223			0.747			0.754		
Satd. Flow (perm)	296	3458	0	415	3493	0	1391	1863	1583	1405	1723	0
Right Turn on Red		Yes				Yes			Yes		Yes	
Satd. Flow (RTOR)	33			15				317			8	
Link Speed (mph)	30			30			30			30		
Link Distance (ft)	386			629			741			129		
Travel Time (s)	8.8			14.3			16.8			2.9		
Peak Hour Factor	0.87	0.87	0.87	0.90	0.90	0.90	0.58	0.58	0.58	0.66	0.66	0.66
Adj. Flow (vph)	8	755	140	216	956	90	155	5	317	111	8	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	895	0	216	1046	0	155	5	317	111	16	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)	12			12			12			12		
Link Offset(ft)	0			0			0			0		
Crosswalk Width(ft)	16			16			16			16		
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60	60		60	60		60
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Minimum Split (s)	9.5	26.5		9.5	26.5		29.0	29.0	29.0	30.0	30.0	
Total Split (s)	15.0	40.0		15.0	40.0		25.0	25.0	25.0	25.0	25.0	
Total Split (%)	18.8%	50.0%		18.8%	50.0%		31.3%	31.3%	31.3%	31.3%	31.3%	
Maximum Green (s)	11.0	33.5		11.0	33.5		20.0	20.0	20.0	20.0	20.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.5		4.0	6.5		5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Walk Time (s)		5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		8.5			6.5		19.0	19.0	19.0	20.0	20.0	
Pedestrian Calls (#/hr)		0			0		0	0	0	0	0	
Act Effct Green (s)	47.0	33.5		47.0	33.5		20.0	20.0	20.0	20.0	20.0	
Actuated g/C Ratio	0.59	0.42		0.59	0.42		0.25	0.25	0.25	0.25	0.25	
v/c Ratio	0.02	0.61		0.50	0.71		0.45	0.01	0.50	0.32	0.04	

## Lanes, Volumes, Timings

30: Westridge Village Pkwy &amp; Highlands Ranch Pkwy

12/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	5.6	19.6		10.6	22.3		30.2	22.7	6.2	27.5	17.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	5.6	19.6		10.6	22.3		30.2	22.7	6.2	27.5	17.0	
LOS	A	B		B	C		C	C	A	C	B	
Approach Delay		19.5			20.3				14.2			26.2
Approach LOS		B			C				B			C
Queue Length 50th (ft)	1	171		39	217		66	2	0	45		3
Queue Length 95th (ft)	6	220		67	288		72	6	0	63		12
Internal Link Dist (ft)		306			549				661			49
Turn Bay Length (ft)	100			100			100		100		50	
Base Capacity (vph)	376	1467		430	1471		347	465	633	351	436	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.02	0.61		0.50	0.71		0.45	0.01	0.50	0.32	0.04	

## Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 33.5 (42%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 70

Control Type: Pretimed

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 19.2

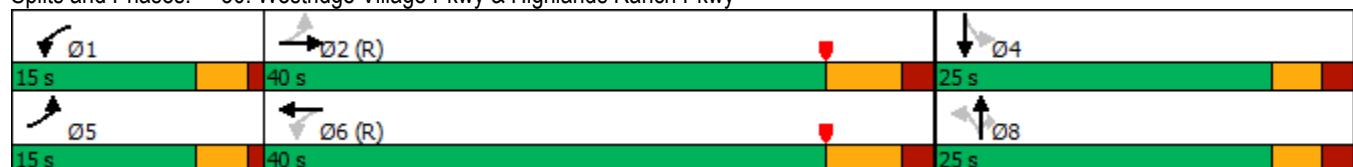
Intersection LOS: B

Intersection Capacity Utilization 57.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 30: Westridge Village Pkwy &amp; Highlands Ranch Pkwy



## Lanes, Volumes, Timings

36: Westridge Knolls Ave &amp; Highlands Ranch Pkwy

12/23/2024

	↑	→	↓	↗	↖	↙	↖	↗	↑	↗	↖	↓	↗
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↑	↑↓		↑	↑↓		↑	↑		↑	↑↓		
Traffic Volume (vph)	71	1145	91	64	1054	40	75	33	56	29	32	43	
Future Volume (vph)	71	1145	91	64	1054	40	75	33	56	29	32	43	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	130		0	150		0	150		0	100		0	
Storage Lanes	1		0	1		0	1		0	1		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.989			0.995			0.906			0.914		
Flt Protected	0.950			0.950			0.950			0.950			
Satd. Flow (prot)	1770	3500	0	1770	3522	0	1770	1688	0	1770	1703	0	
Flt Permitted	0.108			0.104			0.704			0.694			
Satd. Flow (perm)	201	3500	0	194	3522	0	1311	1688	0	1293	1703	0	
Right Turn on Red		Yes				Yes			Yes			Yes	
Satd. Flow (RTOR)		11			5			21			29		
Link Speed (mph)		45			45			30			30		
Link Distance (ft)		502			817			552			297		
Travel Time (s)		7.6			12.4			12.5			6.8		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	77	1245	99	70	1146	43	82	36	61	32	35	47	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	77	1344	0	70	1189	0	82	97	0	32	82	0	
Enter Blocked Intersection	No												
Lane Alignment	Left	Left	Right										
Median Width(ft)		12			12			12			12		
Link Offset(ft)		0			0			0			0		
Crosswalk Width(ft)		16			16			16			16		
Two way Left Turn Lane													
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	60		60	60		60	60		60	60	60	60	
Turn Type	Perm	NA											
Protected Phases		2			6			8			4		
Permitted Phases	2			6			8			4			
Minimum Split (s)	31.5	31.5		31.5	31.5		24.0	24.0		24.0	24.0		
Total Split (s)	45.0	45.0		45.0	45.0		45.0	45.0		45.0	45.0		
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		
Maximum Green (s)	38.5	38.5		38.5	38.5		39.0	39.0		39.0	39.0		
Yellow Time (s)	4.5	4.5		4.5	4.5		3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0		
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0		
Lead/Lag													
Lead-Lag Optimize?													
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0		
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0		
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0		
Act Effct Green (s)	38.5	38.5		38.5	38.5		39.0	39.0		39.0	39.0		
Actuated g/C Ratio	0.43	0.43		0.43	0.43		0.43	0.43		0.43	0.43		
v/c Ratio	0.91	0.89		0.85	0.79		0.14	0.13		0.06	0.11		

## Lanes, Volumes, Timings

36: Westridge Knolls Ave &amp; Highlands Ranch Pkwy

12/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	105.9	33.0		95.9	26.8		16.3	12.6		15.3	10.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	105.9	33.0		95.9	26.8		16.3	12.6		15.3	10.9	
LOS	F	C		F	C		B	B		B	B	
Approach Delay		37.0			30.6			14.3			12.1	
Approach LOS		D			C			B			B	
Queue Length 50th (ft)	39	360		35	297		27	25		10	17	
Queue Length 95th (ft)	#129	#502		#119	381		56	54		27	44	
Internal Link Dist (ft)		422			737			472			217	
Turn Bay Length (ft)	130			150			150			100		
Base Capacity (vph)	85	1503		82	1509		568	743		560	754	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.91	0.89		0.85	0.79		0.14	0.13		0.06	0.11	

## Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 32.0

Intersection LOS: C

Intersection Capacity Utilization 80.2%

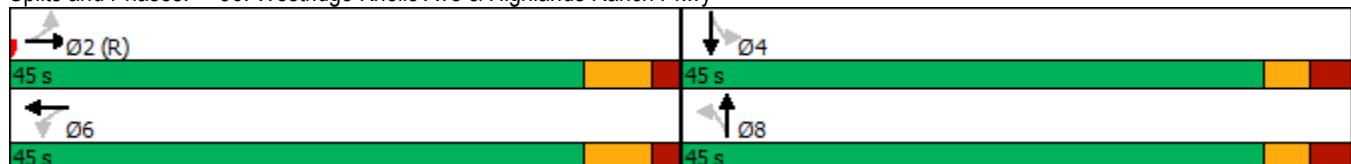
ICU Level of Service D

Analysis Period (min) 15

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 36: Westridge Knolls Ave &amp; Highlands Ranch Pkwy



## Lanes, Volumes, Timings

67: Springhill Pkwy &amp; Highlands Ranch Pkwy

12/23/2024

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑	↑↑	↑↑	↑	↑↑	↑	↑	↑	↑↑	
Traffic Volume (vph)	14	599	291	262	667	47	432	59	376	42	47	27
Future Volume (vph)	14	599	291	262	667	47	432	59	376	42	47	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		165	240		0	250		0	150		0
Storage Lanes	1		1	2		1	2		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.945
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	3433	1863	1583	1770	1760	0
Flt Permitted	0.282			0.191			0.478			0.709		
Satd. Flow (perm)	525	3539	1583	690	3539	1583	1727	1863	1583	1321	1760	0
Right Turn on Red		Yes			Yes		Yes		Yes			Yes
Satd. Flow (RTOR)		262			155				418			19
Link Speed (mph)		30			30			30				30
Link Distance (ft)		705			1593			631				652
Travel Time (s)		16.0			36.2			14.3				14.8
Peak Hour Factor	0.94	0.94	0.94	0.89	0.89	0.89	0.80	0.80	0.80	0.59	0.59	0.59
Adj. Flow (vph)	15	637	310	294	749	53	540	74	470	71	80	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	637	310	294	749	53	540	74	470	71	126	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		24			24			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60	60		60	60	60	60
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Minimum Split (s)	10.0	30.5	30.5	10.0	31.5	31.5	10.0	38.5	38.5	10.0	24.5	
Total Split (s)	15.0	40.0	40.0	25.0	50.0	50.0	40.0	50.0	50.0	15.0	25.0	
Total Split (%)	11.5%	30.8%	30.8%	19.2%	38.5%	38.5%	30.8%	38.5%	38.5%	11.5%	19.2%	
Maximum Green (s)	10.0	33.5	33.5	20.0	43.5	43.5	35.0	43.5	43.5	10.0	18.5	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes											
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0			
Flash Dont Walk (s)		19.0	19.0		20.0	20.0		27.0	27.0			
Pedestrian Calls (#/hr)		0	0		0	0		0	0			
Act Effct Green (s)	45.0	33.5	33.5	60.0	43.5	43.5	60.0	43.5	43.5	30.0	18.5	
Actuated g/C Ratio	0.35	0.26	0.26	0.46	0.33	0.33	0.46	0.33	0.33	0.23	0.14	
v/c Ratio	0.05	0.70	0.51	0.40	0.63	0.08	0.43	0.12	0.58	0.21	0.47	

## Lanes, Volumes, Timings

67: Springhill Pkwy &amp; Highlands Ranch Pkwy

12/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	20.4	48.5	11.1	22.3	39.4	0.3	23.6	30.7	8.2	25.0	49.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.4	48.5	11.1	22.3	39.4	0.3	23.6	30.7	8.2	25.0	49.9	
LOS	C	D	B	C	D	A	C	C	A	C	C	D
Approach Delay									17.4			40.9
Approach LOS							C		B			D
Queue Length 50th (ft)	7	256	31	73	279	0	146	43	30	33	84	
Queue Length 95th (ft)	20	325	117	101	343	0	164	70	65	40	89	
Internal Link Dist (ft)						1513			551			572
Turn Bay Length (ft)	140			165	240			250				150
Base Capacity (vph)	277	911	602	740	1184	632	1256	623	807	339	266	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.70	0.51	0.40	0.63	0.08	0.43	0.12	0.58	0.21	0.47	

## Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 13 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 29.3

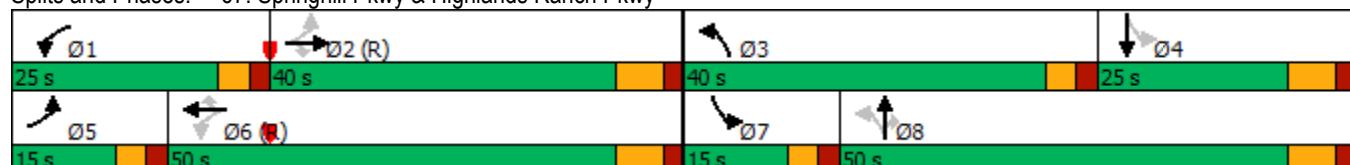
Intersection LOS: C

Intersection Capacity Utilization 59.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 67: Springhill Pkwy &amp; Highlands Ranch Pkwy



## Lanes, Volumes, Timings

70: Foothills Canyon Blvd &amp; Highlands Ranch Pkwy

12/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑↓		↑	↑↑	↑	↑	↑	↑	↑	↑↓	
Traffic Volume (vph)	143	1028	12	47	977	124	51	73	184	86	7	108
Future Volume (vph)	143	1028	12	47	977	124	51	73	184	86	7	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	135			0	170		120	170		170	100	0
Storage Lanes	1			0	1		1	1		1	1	0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998				0.850			0.850		0.859	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3532	0	1770	3539	1583	1770	1863	1583	1770	1600	0
Flt Permitted	0.168			0.156			0.659			0.666		
Satd. Flow (perm)	313	3532	0	291	3539	1583	1228	1863	1583	1241	1600	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				108			164		135	
Link Speed (mph)	30			30			30			30		
Link Distance (ft)	1593			794			600			737		
Travel Time (s)	36.2			18.0			13.6			16.8		
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.52	0.52	0.52	0.80	0.80	0.80
Adj. Flow (vph)	151	1082	13	51	1062	135	98	140	354	108	9	135
Shared Lane Traffic (%)												
Lane Group Flow (vph)	151	1095	0	51	1062	135	98	140	354	108	144	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)	24			24			12			12		
Link Offset(ft)	0			0			0			0		
Crosswalk Width(ft)	16			16			16			16		
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60	60		60	60		60
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	Perm	NA
Protected Phases	5	2		1	6			8				4
Permitted Phases	2			6		6	8		8	4		
Minimum Split (s)	10.0	31.5		10.0	31.5	31.5	34.0	34.0	34.0	33.0	33.0	
Total Split (s)	10.0	45.0		10.0	45.0	45.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	11.8%	52.9%		11.8%	52.9%	52.9%	35.3%	35.3%	35.3%	35.3%	35.3%	35.3%
Maximum Green (s)	5.0	38.5		5.0	38.5	38.5	25.0	25.0	25.0	25.0	25.0	25.0
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.5		5.0	6.5	6.5	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Walk Time (s)		5.0			5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		10.5			10.5	10.5	24.0	24.0	24.0	23.0	23.0	23.0
Pedestrian Calls (#/hr)		0			0	0	0	0	0	0	0	0
Act Effct Green (s)	45.0	38.5		45.0	38.5	38.5	25.0	25.0	25.0	25.0	25.0	25.0
Actuated g/C Ratio	0.53	0.45		0.53	0.45	0.45	0.29	0.29	0.29	0.29	0.29	0.29
v/c Ratio	0.60	0.68		0.21	0.66	0.17	0.27	0.26	0.61	0.30	0.25	

## Lanes, Volumes, Timings

70: Foothills Canyon Blvd &amp; Highlands Ranch Pkwy

12/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	19.6	21.1		9.7	20.7	4.9	25.6	24.5	18.6	26.0	6.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	19.6	21.1		9.7	20.7	4.9	25.6	24.5	18.6	26.0	6.3	
LOS	B	C		A	C	A	C	C	B	C	A	
Approach Delay		20.9			18.5				21.1			14.8
Approach LOS		C			B				C			B
Queue Length 50th (ft)	33	234		11	224	8	40	57	83	44	3	
Queue Length 95th (ft)	#62	305		25	293	38	43	56	51	76	33	
Internal Link Dist (ft)		1513			714			520			657	
Turn Bay Length (ft)	135			170		120	170		170	100		
Base Capacity (vph)	251	1600		241	1602	776	361	547	581	365	565	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.60	0.68		0.21	0.66	0.17	0.27	0.26	0.61	0.30	0.25	

## Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 85

Offset: 13 (15%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 80

Control Type: Pretimed

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 19.6

Intersection LOS: B

Intersection Capacity Utilization 60.1%

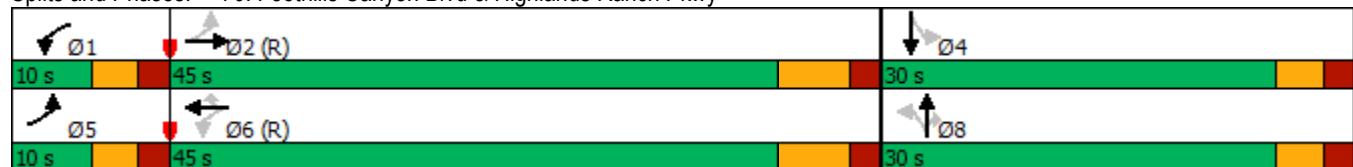
ICU Level of Service B

Analysis Period (min) 15

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

## Splits and Phases: 70: Foothills Canyon Blvd &amp; Highlands Ranch Pkwy



## Lanes, Volumes, Timings

## 75: Wildcat Reserve Pkwy &amp; Mountain Maple

12/23/2024

	→	→	→	←	←	↑	↑	↓	↓	←	→	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑		↑	↑	↑	↑	↑↑	↑	↑	↑↑	
Traffic Volume (vph)	37	8	19	140	15	257	104	497	90	148	472	36
Future Volume (vph)	37	8	19	140	15	257	104	497	90	148	472	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140			0	120		90	200		330	635	0
Storage Lanes	1			0	1		1	1		1	1	0
Taper Length (ft)	25				25			25			25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt				0.894			0.850			0.850		0.989
Flt Protected	0.950				0.950			0.950			0.950	
Satd. Flow (prot)	1770	1665	0	1770	1863	1583	1770	3539	1583	1770	3500	0
Flt Permitted	0.741				0.721			0.420			0.216	
Satd. Flow (perm)	1380	1665	0	1343	1863	1583	782	3539	1583	402	3500	0
Right Turn on Red				Yes			Yes			Yes		Yes
Satd. Flow (RTOR)		39				421				129		10
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		148			238			915			292	
Travel Time (s)		3.4			5.4			20.8			6.6	
Peak Hour Factor	0.49	0.49	0.49	0.61	0.61	0.61	0.70	0.70	0.70	0.83	0.83	0.83
Adj. Flow (vph)	76	16	39	230	25	421	149	710	129	178	569	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	55	0	230	25	421	149	710	129	178	612	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60	60		60	60	60	60
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Minimum Split (s)	34.0	34.0		31.0	31.0	31.0	9.5	31.5	31.5	9.5	31.5	
Total Split (s)	35.0	35.0		35.0	35.0	35.0	15.0	40.0	40.0	30.0	55.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%	33.3%	14.3%	38.1%	38.1%	28.6%	52.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0	30.0	11.0	33.5	33.5	26.0	48.5	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	4.5	4.5	3.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	4.0	6.5	6.5	4.0	6.5	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Walk Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0		5.0	
Flash Dont Walk (s)	24.0	24.0		21.0	21.0	21.0		16.5	16.5		10.5	
Pedestrian Calls (#/hr)	0	0		0	0	0		0	0		0	
Act Effct Green (s)	30.0	30.0		30.0	30.0	30.0	47.0	33.5	33.5	66.0	48.5	
Actuated g/C Ratio	0.29	0.29		0.29	0.29	0.29	0.45	0.32	0.32	0.63	0.46	
v/c Ratio	0.19	0.11		0.60	0.05	0.56	0.33	0.63	0.22	0.30	0.38	

## Lanes, Volumes, Timings

75: Wildcat Reserve Pkwy &amp; Mountain Maple

12/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	30.0	13.2		40.0	27.6	6.1	12.2	33.5	5.6	9.5	18.9	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	30.0	13.2		40.0	27.6	6.1	12.2	33.5	5.6	9.5	18.9	
LOS	C	B		D	C	A	B	C	A	A	B	
Approach Delay				23.0		18.4			26.6			16.8
Approach LOS				C		B			C			B
Queue Length 50th (ft)	39	8		133	12	0	37	212	0	45	134	
Queue Length 95th (ft)	40	11		132	22	0	48	200	18	68	160	
Internal Link Dist (ft)				68		158			835			212
Turn Bay Length (ft)	140				120		90	200		330	635	
Base Capacity (vph)	394	503		383	532	753	453	1129	592	591	1622	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.19	0.11		0.60	0.05	0.56	0.33	0.63	0.22	0.30	0.38	

## Intersection Summary

Area Type: Other

Cycle Length: 105

Actuated Cycle Length: 105

Offset: 45 (43%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Pretimed

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 21.3

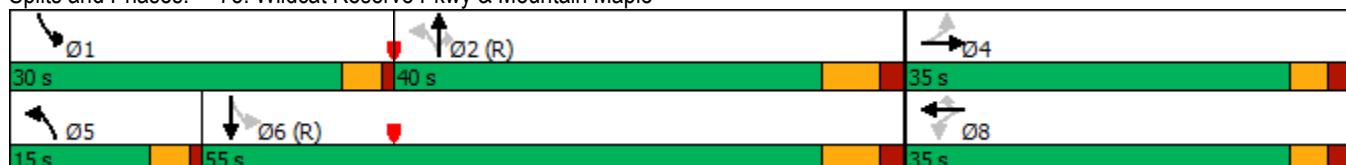
Intersection LOS: C

Intersection Capacity Utilization 56.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 75: Wildcat Reserve Pkwy &amp; Mountain Maple



**Intersection**

Int Delay, s/veh 54.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
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Lane Configurations						
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Traffic Vol, veh/h	0	286	760	311	0	561
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Future Vol, veh/h	0	286	760	311	0	561
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Conflicting Peds, #/hr	0	0	0	0	0	0
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Sign Control	Stop	Stop	Free	Free	Free	Free
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RT Channelized	-	None	-	None	-	None
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Storage Length	-	0	-	180	-	-
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Veh in Median Storage, #	0	-	0	-	-	0
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Grade, %	0	-	0	-	-	0
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Peak Hour Factor	43	43	64	64	76	76
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Heavy Vehicles, %	2	2	2	2	2	2
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Mvmt Flow	0	665	1188	486	0	738
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Major/Minor	Minor1	Major1	Major2
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Conflicting Flow All	-	594	0	0	-	-
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Stage 1	-	-	-	-	-	-
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Stage 2	-	-	-	-	-	-
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Critical Hdwy	-	6.94	-	-	-	-
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Critical Hdwy Stg 1	-	-	-	-	-	-
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Critical Hdwy Stg 2	-	-	-	-	-	-
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Follow-up Hdwy	-	3.32	-	-	-	-
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Pot Cap-1 Maneuver	0	~ 448	-	-	0	-
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Stage 1	0	-	-	-	0	-
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Stage 2	0	-	-	-	0	-
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Platoon blocked, %	-	-	-	-	-	-
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Mov Cap-1 Maneuver	-	~ 448	-	-	-	-
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Mov Cap-2 Maneuver	-	-	-	-	-	-
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Stage 1	-	-	-	-	-	-
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Stage 2	-	-	-	-	-	-
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Approach	WB	NB	SB
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HCM Control Delay, s	253.5	0	0
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HCM LOS	F		
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Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
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Capacity (veh/h)	-	-	448	-
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HCM Lane V/C Ratio	-	-	1.485	-
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HCM Control Delay (s)	-	-	253.5	-
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HCM Lane LOS	-	-	F	-
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HCM 95th %tile Q(veh)	-	-	34.4	-
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**Notes**

~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

## Intersection

Int Delay, s/veh 0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↑ ↗		↑ ↗		↖ ↗	↖ ↗	↖ ↗		↖ ↗		↖ ↗
Traffic Vol, veh/h	11	543	0	0	408	6	0	0	0	2	0	15
Future Vol, veh/h	11	543	0	0	408	6	0	0	0	2	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	0	-	-	-	-	-	-	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	63	63	62	62	62	25	25	25	53	53	53
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	862	0	0	658	10	0	0	0	4	0	28

Major/Minor	Major1	Major2			Minor1			Minor2			
Conflicting Flow All	668	0	0	-	-	0	1573	1564	862	1559	- 663
Stage 1	-	-	-	-	-	-	896	896	-	663	- -
Stage 2	-	-	-	-	-	-	677	668	-	896	- -
Critical Hdwy	4.12	-	-	-	-	-	7.12	6.52	6.22	7.12	- 6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	- -
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	- -
Follow-up Hdwy	2.218	-	-	-	-	-	3.518	4.018	3.318	3.518	- 3.318
Pot Cap-1 Maneuver	922	-	-	0	-	-	89	112	355	91	0 461
Stage 1	-	-	-	0	-	-	335	359	-	450	0 -
Stage 2	-	-	-	0	-	-	443	456	-	335	0 -
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	922	-	-	-	-	-	82	110	355	90	- 461
Mov Cap-2 Maneuver	-	-	-	-	-	-	82	110	-	90	- -
Stage 1	-	-	-	-	-	-	329	353	-	442	- -
Stage 2	-	-	-	-	-	-	416	456	-	329	- -

Approach	EB	WB			NB			SB		
HCM Control Delay, s	0.2	0			0			17.2		
HCM LOS					A			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	
Capacity (veh/h)	-	922	-	-	-	-	-	90	461	
HCM Lane V/C Ratio	-	0.019	-	-	-	-	-	0.042	0.061	
HCM Control Delay (s)	0	9	-	-	-	-	-	46.7	13.3	
HCM Lane LOS	A	A	-	-	-	-	-	E	B	
HCM 95th %tile Q(veh)	-	0.1	-	-	-	-	-	0.1	0.2	

**Intersection**

Int Delay, s/veh 3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
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Lane Configurations						
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Traffic Vol, veh/h	0	157	544	112	0	671
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Future Vol, veh/h	0	157	544	112	0	671
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Conflicting Peds, #/hr	0	0	0	0	0	0
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Sign Control	Stop	Stop	Free	Free	Free	Free
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RT Channelized	-	None	-	None	-	None
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Storage Length	-	0	-	180	-	-
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Veh in Median Storage, #	0	-	0	-	-	0
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Grade, %	0	-	0	-	-	0
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Peak Hour Factor	41	41	72	72	76	76
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Heavy Vehicles, %	2	2	2	2	2	2
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Mvmt Flow	0	383	756	156	0	883
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Major/Minor	Minor1	Major1	Major2
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Conflicting Flow All	-	378	0	0	-	-
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Stage 1	-	-	-	-	-	-
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Stage 2	-	-	-	-	-	-
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Critical Hdwy	-	6.94	-	-	-	-
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Critical Hdwy Stg 1	-	-	-	-	-	-
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Critical Hdwy Stg 2	-	-	-	-	-	-
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Follow-up Hdwy	-	3.32	-	-	-	-
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Pot Cap-1 Maneuver	0	620	-	-	0	-
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Stage 1	0	-	-	-	0	-
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Stage 2	0	-	-	-	0	-
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Platoon blocked, %	-	-	-	-	-	-
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Mov Cap-1 Maneuver	-	620	-	-	-	-
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Mov Cap-2 Maneuver	-	-	-	-	-	-
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Stage 1	-	-	-	-	-	-
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Stage 2	-	-	-	-	-	-
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Approach	WB	NB	SB
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HCM Control Delay, s	19.7	0	0
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HCM LOS	C		
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Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
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Capacity (veh/h)	-	-	620	-
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HCM Lane V/C Ratio	-	-	0.618	-
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HCM Control Delay (s)	-	-	19.7	-
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HCM Lane LOS	-	-	C	-
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HCM 95th %tile Q(veh)	-	-	4.2	-
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## Intersection

Int Delay, s/veh 1.9

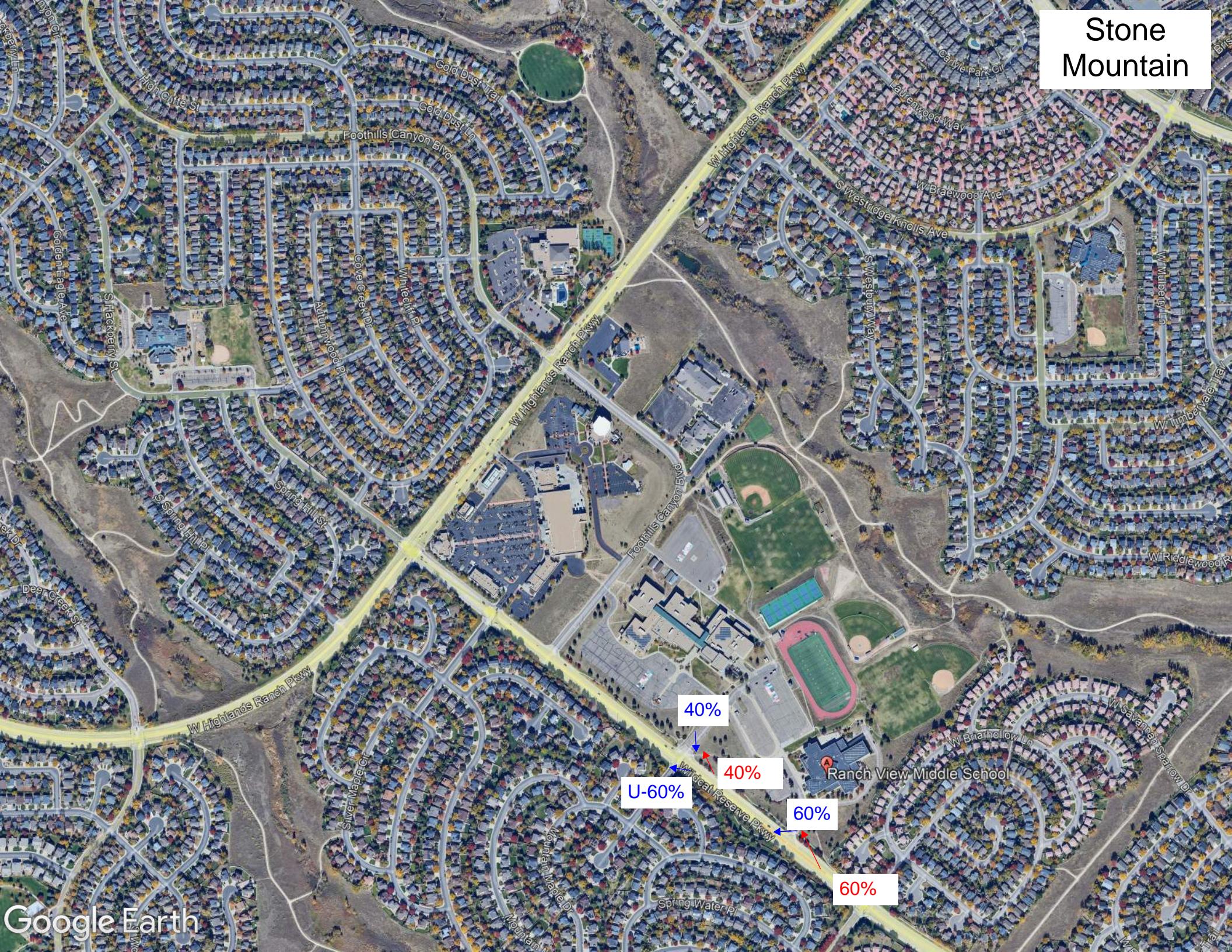
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑		↑		↑	↓	↓		↑		↑
Traffic Vol, veh/h	2	129	111	0	352	8	0	0	0	9	0	57
Future Vol, veh/h	2	129	111	0	352	8	0	0	0	9	0	57
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	0	-	-	-	-	-	-	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	58	58	58	25	25	25	52	52	52
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	152	131	0	607	14	0	0	0	17	0	110

Major/Minor	Major1	Major2			Minor1			Minor2			
Conflicting Flow All	621	0	0	-	-	0	891	843	218	836	- 614
Stage 1	-	-	-	-	-	-	222	222	-	614	- -
Stage 2	-	-	-	-	-	-	669	621	-	222	- -
Critical Hdwy	4.12	-	-	-	-	-	7.12	6.52	6.22	7.12	- 6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	- -
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	- -
Follow-up Hdwy	2.218	-	-	-	-	-	3.518	4.018	3.318	3.518	- 3.318
Pot Cap-1 Maneuver	960	-	-	0	-	-	263	300	822	287	0 492
Stage 1	-	-	-	0	-	-	780	720	-	479	0 -
Stage 2	-	-	-	0	-	-	447	479	-	780	0 -
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	960	-	-	-	-	-	204	299	822	286	- 492
Mov Cap-2 Maneuver	-	-	-	-	-	-	204	299	-	286	- -
Stage 1	-	-	-	-	-	-	778	719	-	478	- -
Stage 2	-	-	-	-	-	-	347	479	-	778	- -

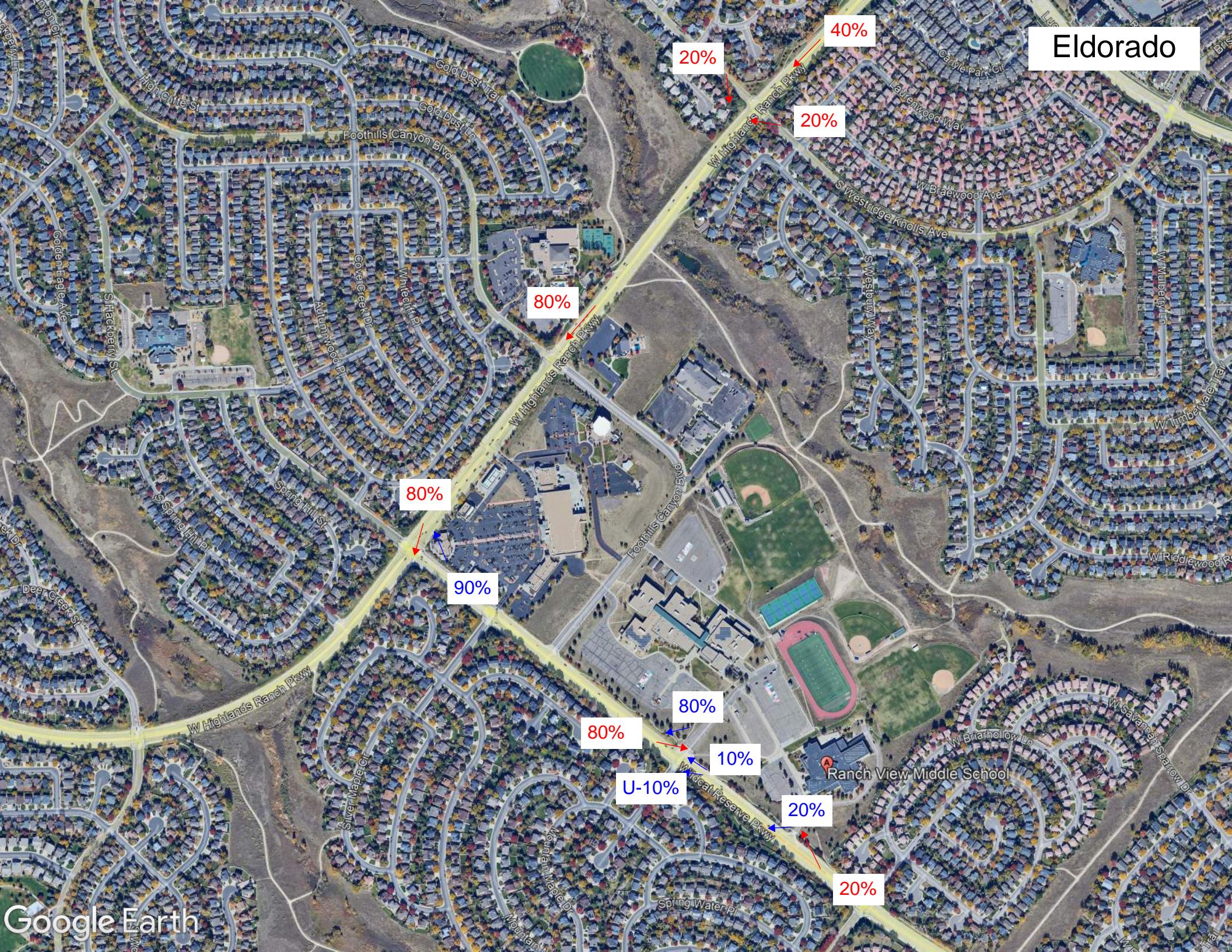
Approach	EB	WB			NB			SB		
HCM Control Delay, s	0.1	0			0			14.9		
HCM LOS					A			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	-	960	-	-	-	-	286	492		
HCM Lane V/C Ratio	-	0.002	-	-	-	-	0.061	0.223		
HCM Control Delay (s)	0	8.8	-	-	-	-	18.4	14.4		
HCM Lane LOS	A	A	-	-	-	-	C	B		
HCM 95th %tile Q(veh)	-	0	-	-	-	-	0.2	0.8		

## Appendix G    Trip Distribution

# Stone Mountain



# Eldorado





Eldorado Elementary Attendance Area | 2017-2018 School Year

Source: Douglas County School District GIS, Douglas County GIS, Elbert County GIS.

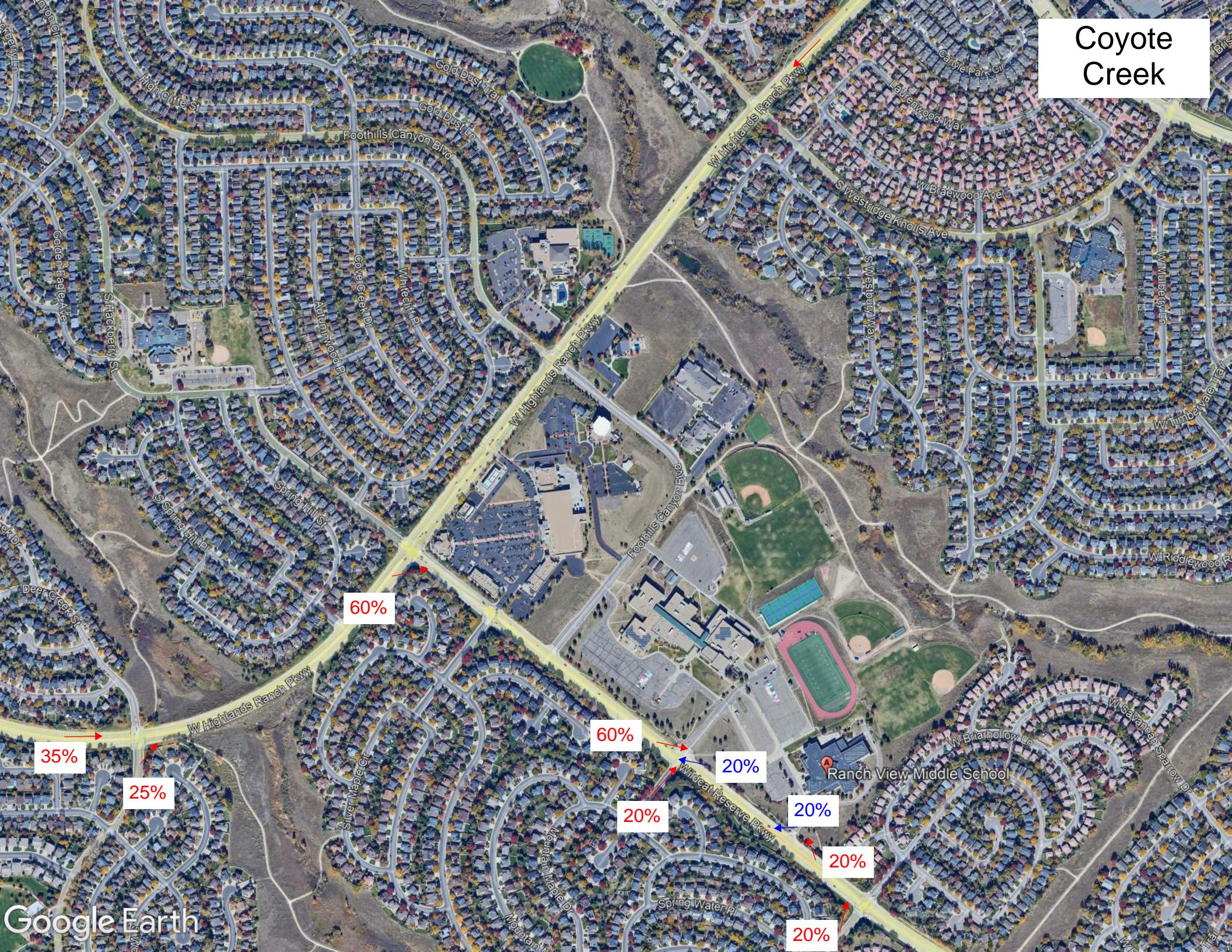
This map is not a legal document.

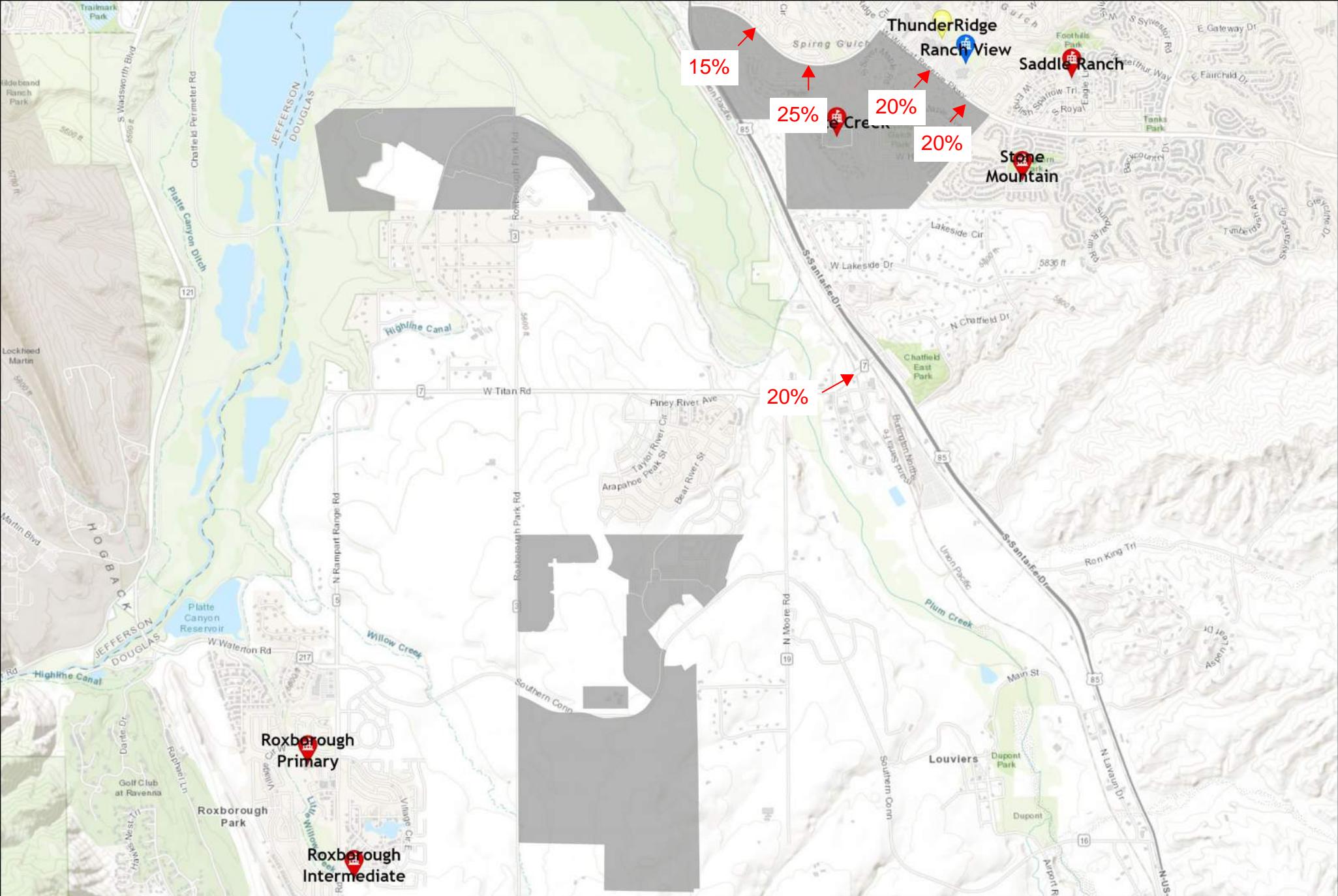
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# Coyote Creek





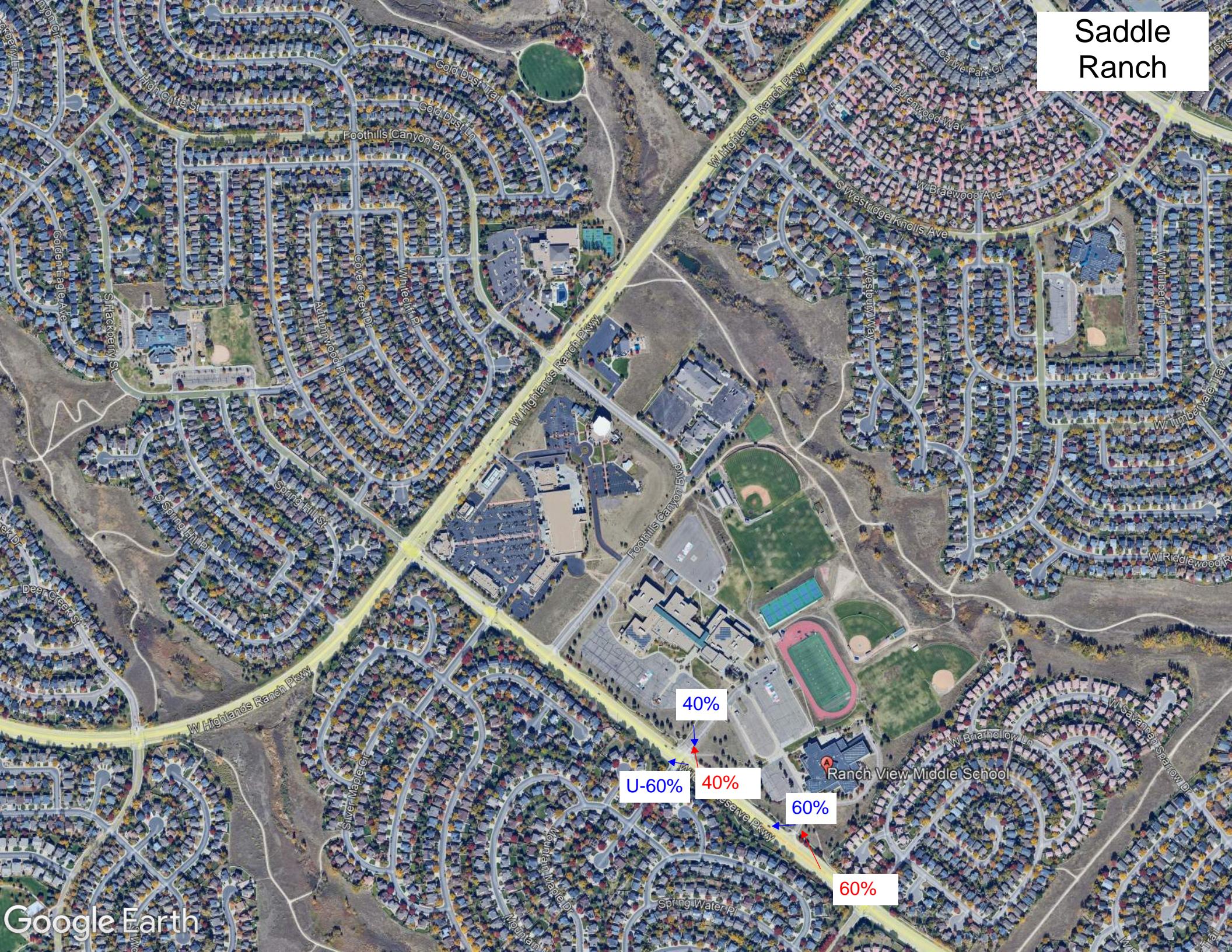
## Coyote Creek Elementary Attendance Area | 2024-2025 School Year

Source: Douglas County School District GIS, Douglas County GIS, Elbert County GIS.  
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# Saddle Ranch





Saddle Ranch Elementary Attendance Area | 2017-2018 School Year

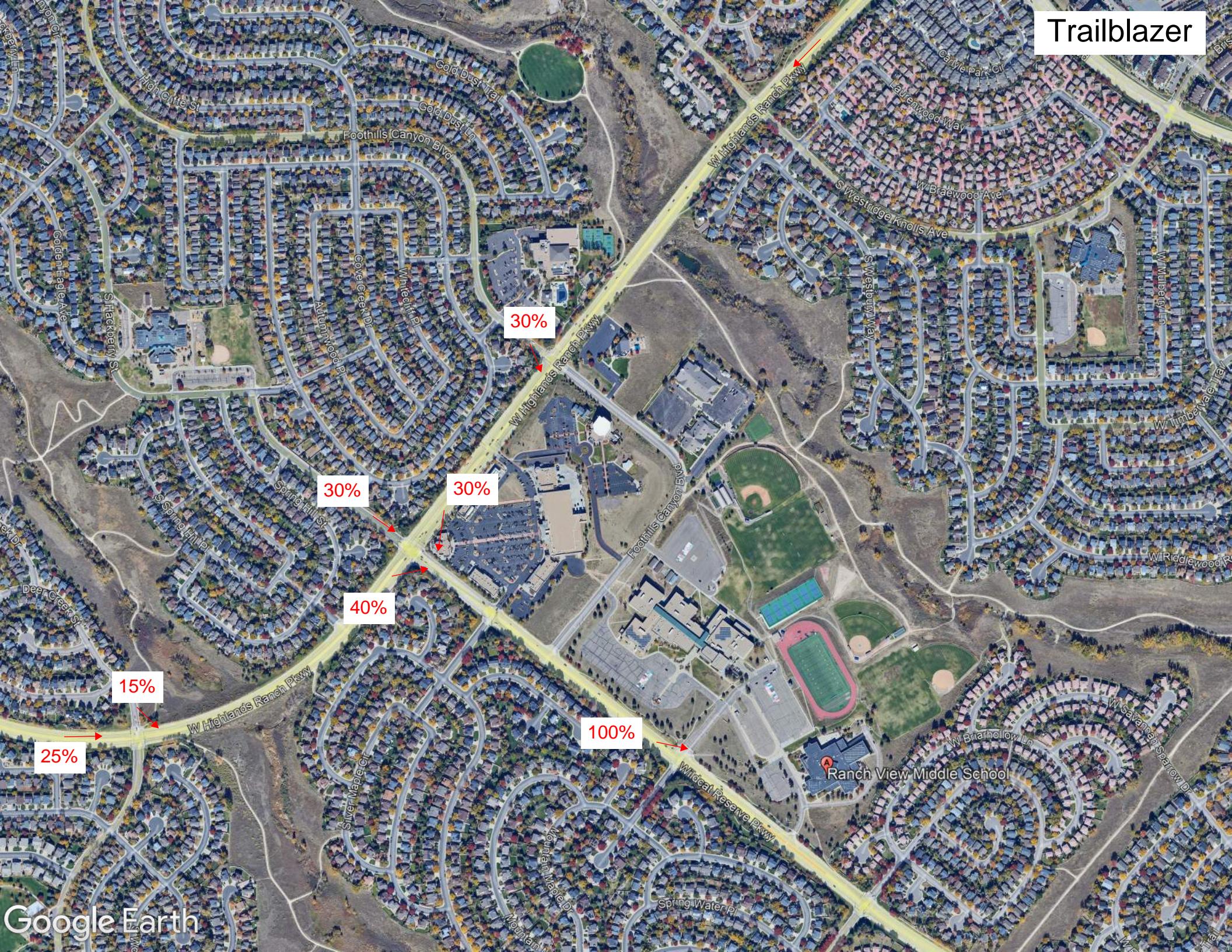
Source: Douglas County School District GIS, Douglas County GIS, Elbert County GIS.  
This map is not a legal document.

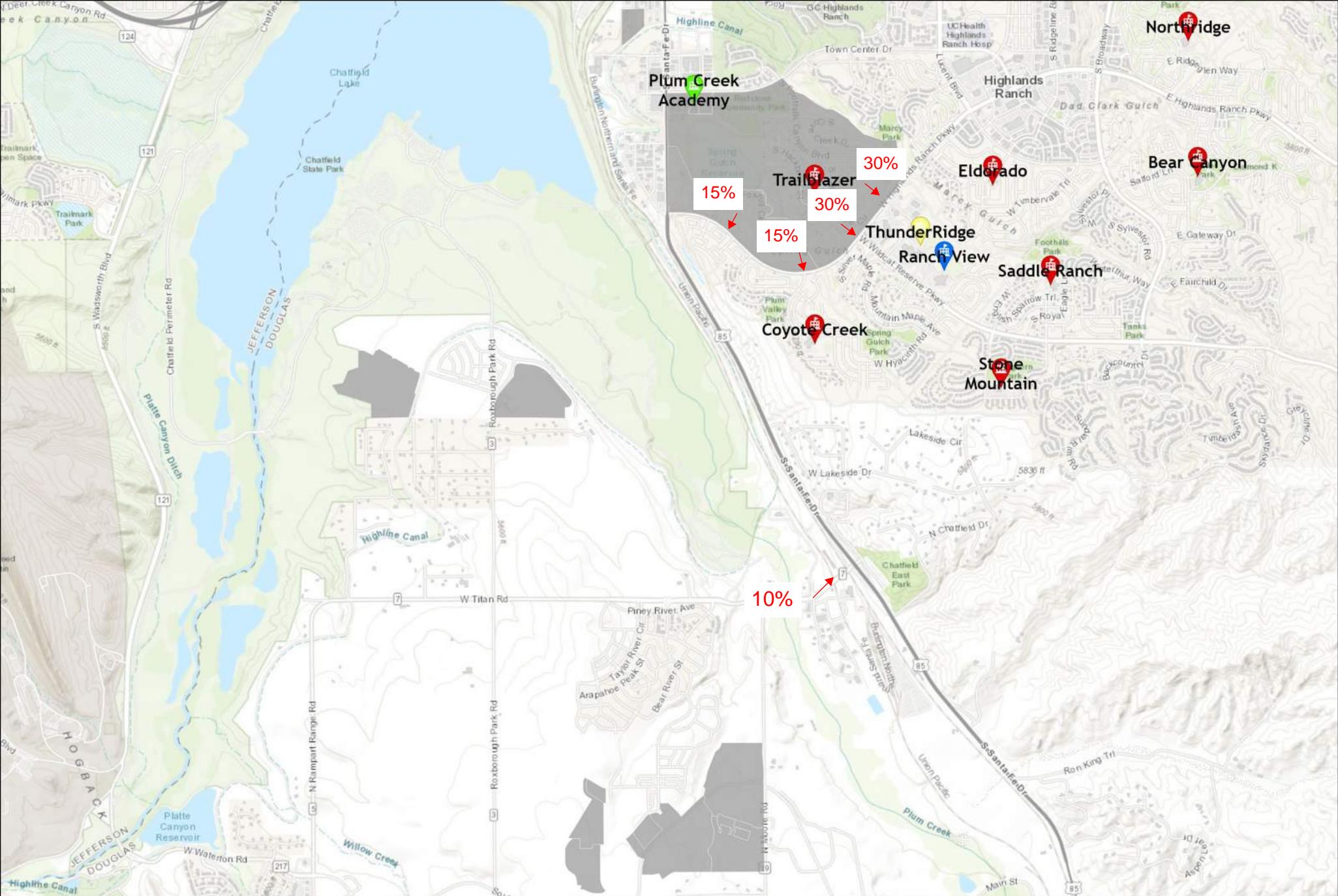
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# Trailblazer



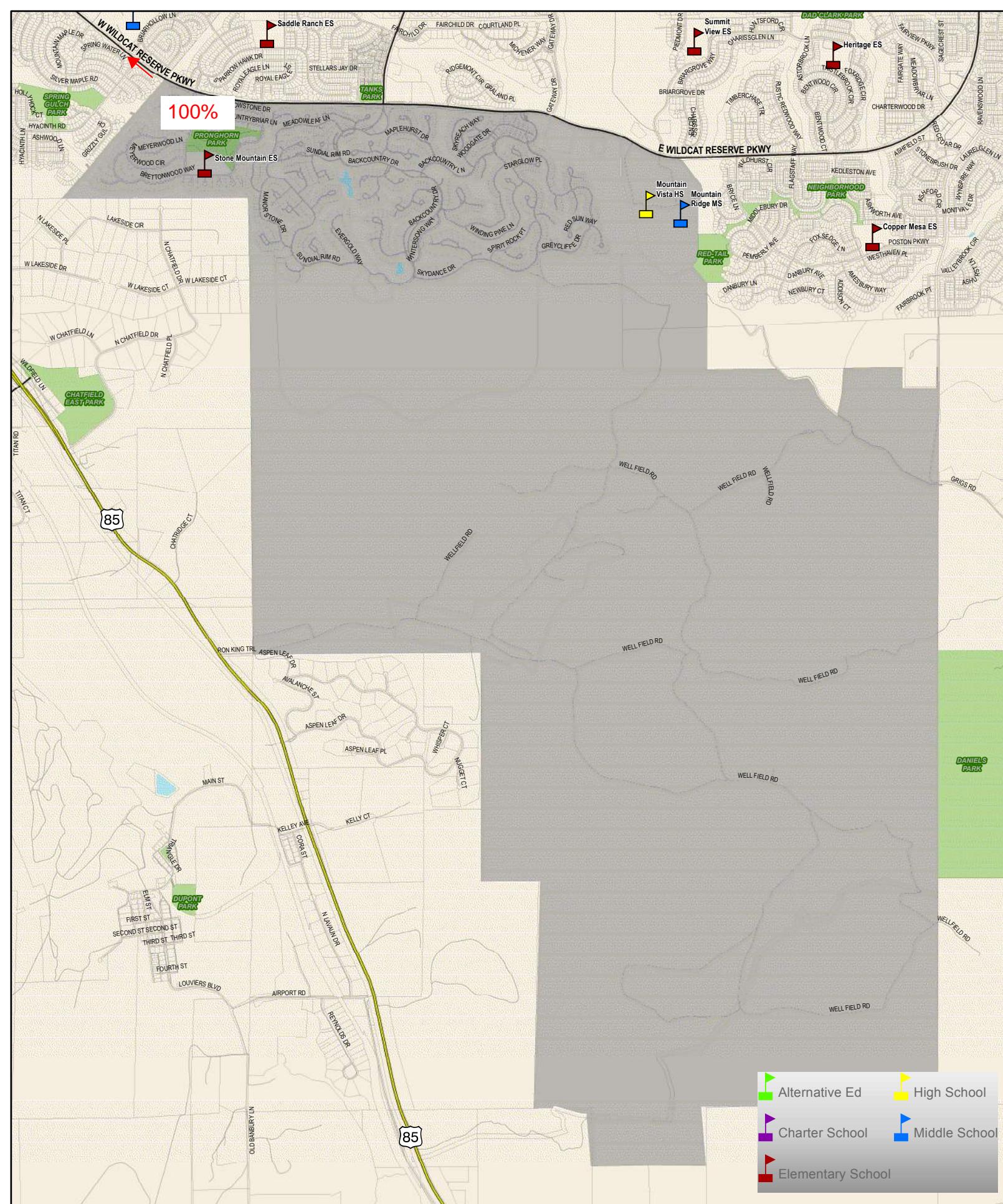


## Trailblazer Elementary Attendance Area | 2024-2025 School Year

Source: Douglas County School District GIS, Douglas County GIS, Elbert County GIS.  
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Stone Mountain Elementary Attendance Area | 2017-2018 School Year

Source: Douglas County School District GIS, Douglas County GIS, Elbert County GIS.  
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